BUSINESS WEEK

175 - INDEX YEAR AGO 150 -100 -50 -25 -



Between Dallas and Fort Worth: The 32 miles get shorter and shorter (page 101)

A McGRAW-HILL PUBLICATION

MARCH 9, 1957

E B POWER STOR S-C ANN AROR YICH S-C



Photo courtesy Burlington Decorative Pabrics, Burlington Industries, Inc.

How to improve fabrics — side unseen!

A long-time problem of a leading manufacturer was to improve the performance of his fabrics for upholstery, drapes, handbags and footwear. He knew the answer lay not in the fabric, but in its *backing*.

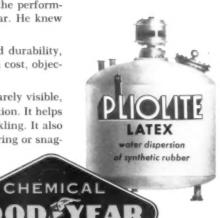
Many types of backings were tried. Some improved strength and durability, but up popped new problems—brittle feel, reduced flexibility, high cost, objectionable odor, poor adhesion or lack of permanence.

The end of the search was a coating based on PLIOLITE LATEX. Barely visible, this lightweight, odorless backing "muscles" fabrics in every direction. It helps retain their shape, even after severe stretching—and reduces wrinkling. It also improves body and drape and increases resistance to raveling, tearing or snagging. And it's permanent!

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DIVISION

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1952 1953 1954 1955 1956 ^J F	M A N	Year	A S Month	O N Week	D § Les
BUSINESS WEEK INDEX (chart)	Average 91.6	Ago 150.8	Ago 151.5	Ago †152.0	*15
RODUCTION					
Steel ingot (thous. of tons). Automobiles and trucks. Engineering censt. awards (Eng. News-Rec. 4-wk daily av. in thous.). Electric power (millions of kilowatt-hours). Crude ell and cendensate (daily av., thous. of bbls.). Bitumineus coal (daily av., thous. of tons). Paperboard (tons)	1,281 62,880 \$17,083 4,238 4,751 1,745 167,269	2,462 167,422 \$64,254 11,199 7,156 1,662 294,755	2,485 173,063 \$58,017 12,322 7,422 1,695 276,706	2,456 †169,083 \$62,437 11,920 7,567 1,625 262,293	2,4 174,6 \$57,7 11,7 7,5 1,6 266,2
RADE					
Carloadings: miscellaneous and Lc.L (daily av., thous. of cars)	82 53 90 22	72 46 97 293	66 45 96 320	68 45 102 300	1
PRICES					
Spet commodities, daily Index (Moody's, Dec. 31, 1931 = 100) Industrial raw materials, daily Index (BLS, 1947-49 = 100) Peodstuffs, daily Index (BLS, 1947-49 = 100) Print cleth (spot and hearby, yd.) Pinished steel, Index (BLS, 1947-49 = 100). Scrap steel composite (Iron Age, ton) Cepper (electrolytic, delivered price, E & MJ, lb.). Wheat (No. 2, hard and dark hard winter, Kansas City, bu.) Cotton, daily price (middling, 1 in., 14 designated markets, lb.). Weel teps (Boston, lb.).	311.9 ††73.2 ††75.4 17.5¢ ††76.4 \$20.27 14.045¢ \$1.97 **30.56¢ \$1.51	404.6 99.2 76.2 20.2¢ 157.1 \$47.83 47.105¢ \$2.23 36.45¢ \$1.80	425.4 95.9 82.2 18.4¢ 171.7 \$53.83 34.380¢ \$2.35 33.67¢ \$2.21	412.5 94.1 80.3 18.1¢ 173.4 \$52.17 31.763¢ \$2.34 33.82¢ \$2.18	41 9. 86 18. 17: \$50. 31.91 \$2. 33.8 \$2.
INANCE					
500 stocks composite, price index (S&P's, 1941-43 = 10)	17.08 3.05% ¾-1%	45.89 3.58% 3%	44.32 4.48% 3%%	43.42 4.47% 3%%	43. 4.46 3%
ANKING (Millions of Dollars)					
Demand deposits adjusted, reporting member banks	††45,820 ††71,916 ††9,299 ††49,879 23,888	56,230 84,190 26,316 28,272 25,089	58,076 85,297 30,260 26,101 25,087	†56,214 †85,069 †30,347 25,809 24,764	56,3 85,0 30,3 25,7 24,8
MONTHLY FIGURES OF THE WEEK		1946 Average	Year Ago	Month Ago	Les
Private expenditures for new construction (in millions)	********	\$803 \$197 \$6,704 \$3,174 \$21.3	\$2,088 \$773 \$37,848 \$28,886 \$46.3	\$2,188 \$863 \$41,863 \$31,552 \$51.4	\$2,0 \$8 \$40,9 \$31,2 \$51

^{*} Preliminary, week ended Mar. 2, 1957. † Revised.

& Date for 'Latest Week' on each series on request.

THE PICTURES—Waiter Bennett—25 (cen.); Horaca Bristol—130, 131, 133, 134, 136; John Bryson—77, 78; Grant Compton—52, 53, 183; Dukane Corp.—192; Martin Harris—30; Herb Kratovil—cover, 102, 103, 104, 105, 109, 110, 112, 116; McGraw-Hill World News—34; George Miller—88, 89, 90; Leonard Nadel—148, 149; Ed Nano—24; Joan Sydlow—29; Tank Lining Corp.—188; U.P.—26, 28; W.W.—23, 25 (lt. & rt.), 166.

^{††} Estimate.

• * Ten designated markets, middling } in.

Telephone Lines for 1487-mile Pipeline

Telephone companies provide tailored communications service for natural gas pipeline to Pacific Northwest

One of the great construction projects of recent years was completed just a few months ago.

It's the Pacific Northwest Pipeline, popularly known as the "Scenic Inch" because of the rugged, picturesque territory through which it passes.

This 1487-mile pipeline now runs from the producing fields in New Mexico to the Canadian border of Washington by way of Portland, Oregon, and Seattle, Washington. It carries vitally needed fuel to the last sections of the United States that did not have natural gas.

Such a pipeline requires constant supervision and automatic control, and reliable communications are extremely important.

After long study, Fish Northwest Constructors, Inc., acting as agents for Pacific Northwest Pipeline Corporation, selected telephone company facilities based on cost, reliability, availability of alternate routing and experience in specialized service. Voice communication is in use now; telemetering, teletypewriter and other services are in the future.

The furnishing of such private line service by telephone companies has grown rapidly in recent years and offers many opportunities for the future. New services are constantly being developed to meet particular needs.



DRILLING FOR GAS

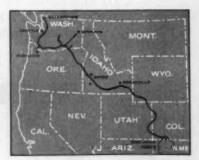
Rotary rig drilling for natural gas in the San Juan basin, New Mexico. This is a major source of supply for the Pacific Northwest Pipeline.



RUGGED COUNTRY

Fish Northwest Constructors' photograph taken as they were laying the pipeline across the Powder River, near Baker, Oregon, at 15° below.

PIPELINE ROUTE. Communication facilities along the route are provided by the Mountain States Telephone & Telegraph Company, the Pacific Telephone and Telegraph Company and the Bell System's Long Lines Department, in cooperation with the General Telephone Company of the Northwest and the Midland Telephone Company of Moab, Utah.





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READERS REPORT

Bravo e Non Cosi Bravo

May I say "bravo" to your article on opera in Italy [BW-Feb. 9'57,p146]-and not so "bravo" to your article on radio [BW-Feb.9 57,p131]. It was a good attempt but it lacked some facts and it lacked knowledge on the part of the writers.

EDGAR KOBAK

New York, N. Y.

Dear Sir:

On this Valentine's Day, let me say that I love you for the article, A Lot of Life in Radio Yet [BW-Feb.9'57,p131], in which you put into print in your fine magazine lots of things we've been trying to tell businessmen for six or seven years. Now maybe they'll believe

AL EVANS

SALES MANAGER RADIO STATION WJXN JACKSON, MISS.

Dear Sir:

. . . Congratulations on an excellent, objective article regarding the progress radio has made in the past few years. . . .

W. L. SIMPSON

ASSISTANT GENERAL MANAGER SEATTLE BROADCASTING CO. SEATTLE, WASH.

I read with great interest and appreciation your article on radio. I think it was excellent. . . . I think it is a real contribution to the industry as well as to the enlightenment of your readers. .

DONALD H. McGANNON

PRESIDENT

WESTINGHOUSE BROADCASTING CO. NEW YORK, N. Y.

Coinsurance Confusion

Dear Sir:

I am writing in reference to Personal Business [BW-Jan.19'57,

In it, there is a warning to dwelling owners to be sure to check their coinsurance clause on their fire policy. . . . In most states, there are no coinsurance requirements as far as single-family and two-family dwellings are concerned. New York and California are the two exceptions that I am familiar with, but there may be a few others.

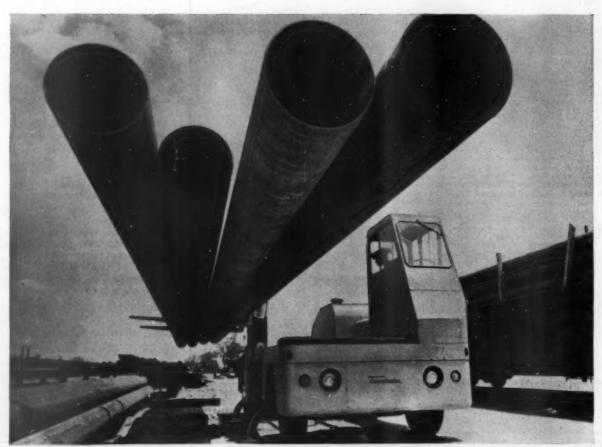
Under the New Homeowner's



OTIS ELEVATOR COMPANY, ALWAYS
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HANDLING, HAS TAKEN ITS FIRST
STEP TOWARDS LEADERSHIP IN
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Among the products of The Baker-Raulang Company is the Traveloader, an entirely new concept in the field of mechanized handling of long, bulky loads. The Traveloader performs three distinct operations. It stacks like a fork truck, carries like a straddle truck, and delivers like a road truck. Gas or Diesel-powered Traveloaders are available in 6,000 to 30,000 pound capacities. A 4,000 pound capacity Electric-powered Traveloader with solid tires is available for indoor handling in narrow aisles.

OTIS has greatly expanded the engineering and research facilities of its recently acquired subsidiary, the BAKER-RAULANG COMPANY, Cleveland, Ohio. The product line has been broadened. It now includes a complete range of <u>GAS and ELECTRIC</u> Fork Trucks and an exclusive line of <u>GAS and ELECTRIC</u> side-loading Traveloader® Trucks, also Crane and Platform Trucks. You can now look to OTIS and BAKER for progress in horizontal materials handling.

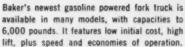
AN OTIS SUBSIDIARY, IS THE MAKER OF

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Industrial trucks







The battery-powered fork trucks in the Baker line range in capacity from 1,000 to 15,000 pounds. Baker was a pioneer in materials handling and has been producing electric industrial trucks for more than 35 years.



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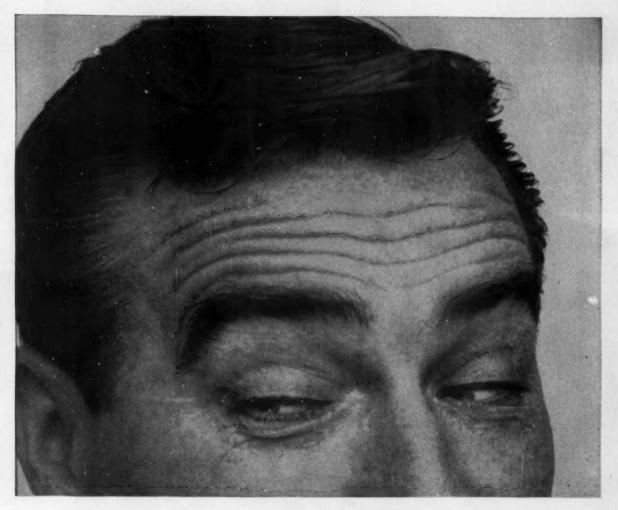


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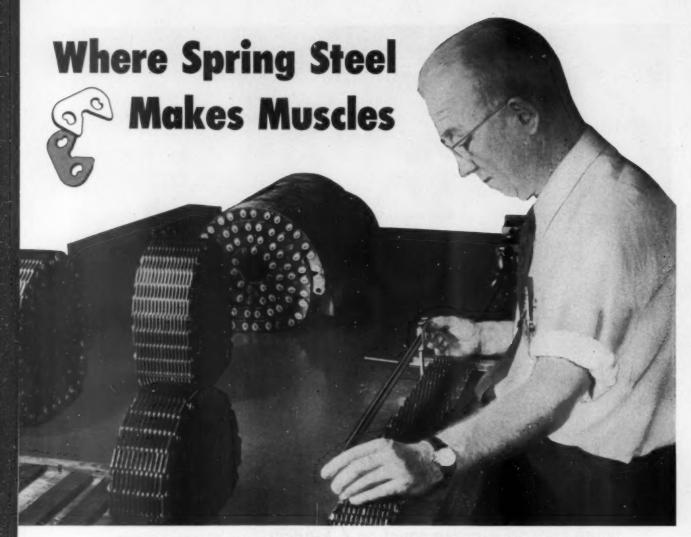
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Uniform quality of steel from Thomas Strip Division, used for links on Morse Chain's rugged Hy-Vo power transmission drive, shows up as assembled chain is checked with a Vernier Gauge.

Quality Thomas Strip Scores High As Links for Morse Chain's Rugged Hy-Vo

Because Morse Chain Company's Hy-Vo Chain transmits more power per inch of width than any conventional chain, it handles some of industry's toughest jobs.

And Hy-Vo can do its power transmission jobs at speeds up to 90 miles an hour.

There's a job in the oil fields, for example, that demands the kind of muscles Hy-Vo has—muscles that Pittsburgh Steel Company's Thomas Strip Division builds into Hy-Vo's durable links.

This tough oil field application requires a rugged four-inch wide power chain to transmit maximum horse-power to pumps operating at pressures up to 10,000 psi.

Thanks to precision engineering at Morse Chain and uniform quality steel, Hy-Vo takes this punishment in stride.

To make such a dependable, trouble-free power chain drive, Morse Chain—a division of Borg-Warner—buys the best steel made.

That's why tons of quality, cold rolled, high carbon spring steel strip from Thomas Strip are shipped each month to Morse Chain's Ithaca, N.Y., plant. Each coil must meet Morse Chain's demand for strip that has:

 Punchability and Shearability which show up on Morse high speed piercing and blanking presses making the chain links.

Uniform quality in the strip adds

to the number of strokes possible before tools must be reground or sharpened.

Norman Bremer, chief engineer at Morse, underscored the importance of longer tool life when he declared:

"The more strokes we get between grinds, the lower our operating expenses."

• Holding Tolerances from shipment to shipment and from coil to coil. A foot length in any of the four sizes of the Hy-Vo can vary only from zero to plus 15 thousandths of an inch.

Even minute variations in thickness on each of the links that make up a width of Hy-Vo chain are enough to cause excessive stack-up in the assembly of the chain. Result: a rejected chain.

What's more, in a given length of Hy-Vo chain there are hundreds of links and many pins which require extremely close tolerances.

"Our experience with Thomas



Sample coils of Thomas Strip are taken to the Morse Metallurgical Lab for checks on chemical analysis.



Punchability and shearability qualities of Thomas Strip appear as coil is fed into a piercing and blanking press,



After links are blanked, tolerances on hole sizes are checked closely so that pins joining links will fit snugly.



Careful hand assembly of each Hy-Vo Chain follows after heat-treating and blackening of links. Fine grain cold rolled spring steel from Thomas Strip prevents undersize holes and excessive burrs.

Strip's ability to meet our rigid tolerance requirements has been very satisfactory," said Ted Sharp, Mr. Bremer's assistant. Just as it does in any application . . . including fasteners, springs or automotive parts. . . Thomas cold rolled high carbon strip gives Morse these advantages:

 Hardenability that shows up during the rapid fire piercing and blanking operations. Too soft or too hard strip boosts the rejection rate and takes its toll of costly tools.

This is especially important because Hy-Vo Chain must meet an average ultimate tensile strength of 20,000 pounds per inch of pitch and width.

- Uniformity in Micro-structure adds to tool life and aids cleanliness in piercing and blanking links.
- Standard Size Coils of Thomas Strip's spring steel keep production humming and orders filled for Morse customers. Small size coils slow up the

production pace because machines have to be stopped for each new coil.

If your product requires high carbon spring steel, you can duplicate the benefits Morse Chain Company gains through using Thomas Cold Rolled Strip. Whatever your needs for top quality steel strip specialties it will pay you to consider Thomas Strip. It's available plain or already coated with zinc, copper, brass, nickel, lead alloy or tin in a wide variety of finishes.

Get in touch today with Thomas Strip through any district sales office listed below. Trained engineering help is available to help solve your production problems. Call now.



Pittsburgh Steel Company

Grant Building

Pittsburgh 30, Pa.

District Sales Offices

Atlanta Chicago Cleveland Calumbus Dallas Dayton

Detroit Houston Los Angeles New York Philadelphia Pittsburgh Tulsa Warren, Ohi





Garage and stockroom floors in Burny Bros. large, modern bakery get daily scrubbing with a Job-Fitted Combination Scrubber-Vac and Setal Cleanser

THEY'RE AN UNBEATABLE TEAM to speed the cleaning of oily, greasy floors. Here's why: A Scrubber-Vac completely mechanizes scrubbing. It applies the cleanser, scrubs, flushes if required, and picks up (damp-dries the floor)—all in one operation! Job-fitted to specific needs, a Scrubber-Vac provides the maximum brush coverage consistent with the area and arrangement of the floors. Its teammate, Setol Cleanser, is specially designed for the greater speed of combination-machine-scrubbing... emulsifies grimy oil and grease instantaneously for fast, thorough removal by the machine's powerful vac. Moreover, Setol retains its strength longer than average alkaline cleansers. This, too, speeds the cleaning process... saves on materials... and cuts operating time of the machine, which in turn reduces labor costs.

The Scrubber-Vac shown above is Finnell's 213P, for heavy duty scrubbing of large-area floors. It's self-propelled, and has a 26-inch brush spread. Cleans up to 8,750 sq. ft. per hour (and more in some cases), depending upon condition of the floors, congestion, et cetera. (The machine can be leased or purchased.) Finnell makes a full range of sizes, and self-powered as well as electric models . . . also a full line of fast-acting cleansers. In fact, Finnell makes everything for floor care!

Find out what you would save with combination-machine-scrubbing. For demonstration, consultation, or literature, phone or write nearest Finnell Branch or Finnell System, Inc., 3803 East St., Elkhart, Ind. Branch Offices in all principal cities of the United States and Canada.



"C" Package Policy, there is an extension of coverage which states that if at the time of loss the limit of liability for the dwelling covered under the policy is 80% or more of the full replacement costs, the coverages applying to the dwelling and any outbuildings are extended to include the full cost of repair or replacement without deduction for depreciation. This might have been the source of confusion. . . .

WARREN H. BURROUGHS BOSTON, MASS.

Pull In Our Horns

Dear Sir:

. . I was glad to see in the Washington Outlook [BW-Feb.2] '57,p42] "There's a dump-Stassen move in Congress." It is about time we got this done and also about time that we pulled in our horns with Secretary Dulles, in my opinion, as well, instead of scavenging the world. Good omen about good people is important and even though I say this about Mr. Dulles, he has been a good man but we are going too far afield and with too much authority. This must revert to the Congress and the Senate, in my opinion.

F. M. Young

PRESIDENT YOUNG RADIATOR CO. RACINE, WIS.

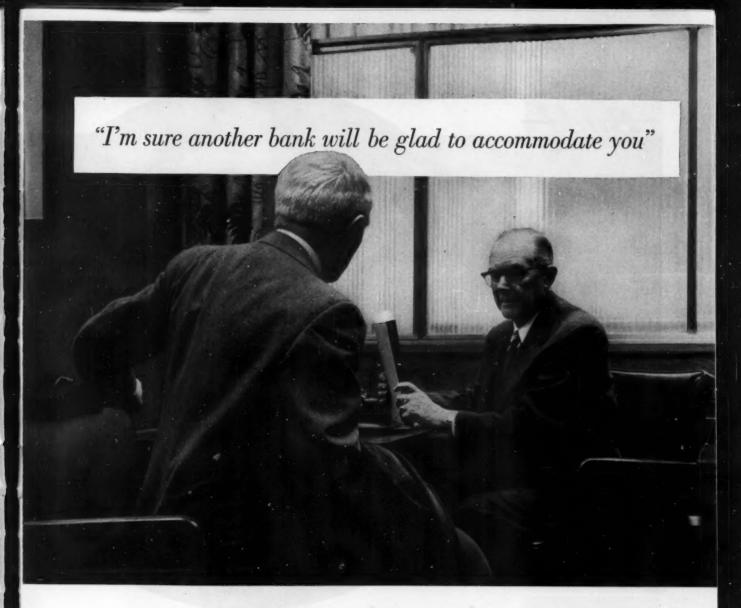
Elusive Terms

Dear Sir:

The Trend [BW—Feb.2'57,p 144] seems keener than the departmental report on the role of "savings" [BW—Feb.2'57,p96], perhaps because it is easier to write of "what we don't know about money"—and about gold, . . . than about what some "experts" think they know about it when labeled "savings" and sadly confused with capital and its formation investment.

What do we actually do to cover, not depreciation, but obsolescence of capital? Do not depreciation reserves become excessive with technological advance and turn into capital gains, for innovators, which cause capital losses in competing but obsolete investments? Savings must thus decline when capital gains are registered! . . .

Obsolescence is the essence of the risk in industrial investment. It's virtually impossible to register it statistically, for what is sold for money is in two price categories, namely, cost or value, whichever is greater. Cost will exceed value



"That's all well and good," Peterson's thinking, "if there were any other banks." But he's been to them all. And no one wants to lend him the money.

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If only Peterson had known about the Keysort Plant Control Plan! With daily PCP reports before him, he could have held in-process inventory to a minimum. The tighter scheduling made possible by PCP would have speeded and steadied production flow. Result: earlier deliveries, cash coming in faster, a sounder borrowing position.

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In countless millions of electrical or electronic installations, from the telephone on your desk, the television set in your living room, to giant airliners and steamships, these products provide the basic insulation which keeps vital current from dangerous and destructive wandering.

This is a service to many industries of many kinds, including Budd's own construction of stainless steel rail-way passenger cars in which Continental-Diamond Fibre products are used.



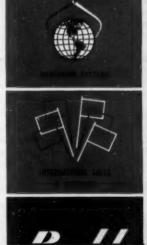


ENTERING NEW FIELDS OF TECHNOLOGY

The creative engineering and agile technical resources which have been developed in the design and production of automobile bodies, wheels, trains, disc brakes and other contributions to improved transportation, are now being turned to many new and exciting activities.

Among them is a close association with the aircraft industry in manufacturing components for jet engines, and working on the development of airframes to meet the increasingly enlarging thermal problems caused by the heat generated by skin friction at high speeds.

Also, Budd is now active in the development of methods to employ radioisotopes, and in the creation of systems for "environmental testing". Today, Budd is a many-sided industry. The Budd Company, Philadelphia 32.





No load is big enough to stall the engine when the tractor has a National Supply torque converter. 17 basic sizes available to match exactly engines of 100 to 1000 horsepower,

Easy way to tell if a heavy-duty machine needs a torque converter

You can tell simply by listening to the engine while the machine is operating. Does it run fast—then slow down as the load builds up—then drop off to idling speed—then start all over again? If so, a National Supply torque converter would probably make the machine make more money for you.

A National Supply torque converter lets the machine work at full capacity all the time. The engine never labors or stalls because of overload. Instead, it runs continually in its best speed range and delivers its full horsepower at all times.

The torque converter automatically increases or decreases the flow of power as required by each change in the load. Many little delays and losses are eliminated.

Your machine gets more work done in a day. Also, because of the shock-cushioning effect of the National Supply torque converter, there's less engine maintenance . . . less wear and tear on equipment.

If you operate heavy-duty machinery, you should look into torque



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converters. National Supply, with experience in the application of highpower fluid transmission since the 'thirties, can help you. Write to have a National Supply engineer analyze your problem and figure the results you can expect from a torque converter. The National Supply Company, Two Gateway Center, Pittsburgh 22, Pennsylvania.

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INDUSTRIAL PRODUCTS DIVISION Two Gateway Center, Pittsburgh 22, Pa.



Pace-setters in the progress of industrial power transmission for non-productive, luxury durables and so fix price. Value will exceed cost for durables which, for the time being at least, are not outmoded as productive capital items which are appraised by "capitalizing," at the reciprocal of the interest ratio (that is, multiplying by 20) that elusive balance called net income.

ALDEN POTTER

BETHESDA, MD.

An Eye On the Ball

Dear Sir:

Re: "Putting Volume Before Profits?" [BW—Feb.9'57,p129] public relations efforts masquerading for statements of over-all corporate objectives have helped confuse this issue.

To understand business objectives it is necessary to consider the economic process flow.

"To serve the consumer" is the origin of corporate business behavior, not an over-all objective. From this stimulus flow various part-objectives for the functional areas within a business, such as "volume" (production), "industry leadership" (marketing, etc.).

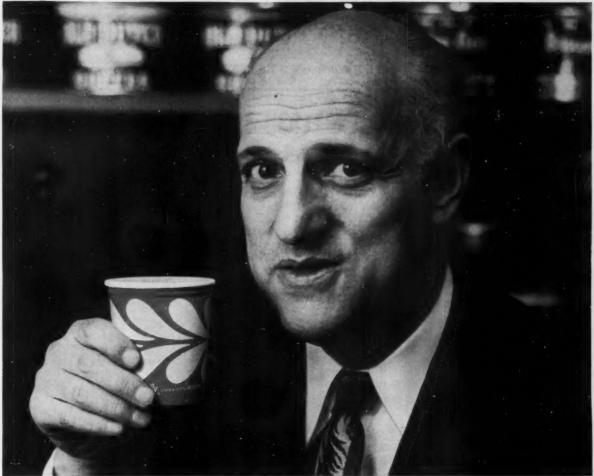
It is only at the next step, that we finally enter the domain of over-all objectives, where "profits" undoubtedly are the first in order. On the assumption, however, that money is only good for what it will buy, over-all objective two is innovation," forced upon the business by competitors and our friend the consumer, and representing adaptive behavior on the part of the business animal.

This leads to the next step in over-all objectives of "growth," followed by "survival" (short-term application only), and finally by "continuity" (long-term application).

Survival can be accomplished by selling off earning assets, so survival alone as an over-all objective does not guarantee continuity. Thus, the only, but requisite, overall business objectives are profits, innovation, growth, survival, and continuity, and in that order.

WALTER G. MITCHELL MANAGEMENT ANALYST ROYAL MCBEE CORP. PORT CHESTER, N. Y.

Letters should be addressed to Readers Report Editor, BUSINESS WEEK, 330 West 42nd Street, New York 36, N. Y.



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Saves the shape! Remains sturdy in the hand, even under rough and rugged use.



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Lily worked ten years on the problem of developing a truly satisfactory cup for the serving of coffee, tea and other hot liquids. The answer was a plastic inner coating—similar to real china.

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BUSINESS OUTLOOK

BUSINESS WEEK MAR. 9, 1957



Inventory problems won't be eased much by the reopening of the Suez Canal—if and when (page 23).

- Supplies of imported commodities such as rubber and tin should improve. Shorter ocean hauls, lower shipping rates, and fewer schedule interruptions will work on the side of lower prices.
- But Western Europe will be buying more as its fuel supplies improve.
 This will at least partly offset price softening.
 - · And political unrest, as in Indonesia, will harass importers.

Price trends in commodities we import have not been clearly marked in the last few days. Presumably earlier efforts to get them adjusted to a Suez reopening already are reflected in trading.

Rubber is down 5¢ a lb. and both tin and wool about 10¢ a lb. from highs posted while tension still was running high.

Among lesser items, burlap has retained most of its September-December gain but shellac has skidded all the while. And cocoa, which doesn't come through Suez but crosses oceans, has gone down and down.

Natural rubber, with a price no less bouncy than the commodity itself, is going to have trouble regaining markets lost to synthetic.

Tree rubber unquestionably outdoes synthetic in some uses. Otherwise, it wouldn't consistently command a price premium. But the way that premium goes from a few cents to 30ϕ or 40ϕ a lb. (and down again) makes it highly speculative to hold in inventory.

Meanwhile synthetic, with its steady price and trustworthy supply, sets new records. Nearly 87,000 tons were used in January (a new peak) against natural's 53,000, no better than the year before.

Petroleum is the product upon which normal Suez operations can be expected to have the sharpest impact.

Domestic production of crude oil has been setting new records almost weekly. But more and more has been going to Europe in its crude state; refinery runs in this country have fallen fairly sharply from their previous high level of about 8.2-million bbl. a day.

That helps hold down the gasoline surplus. But it reverses normal patterns for we usually refine much more than we produce.

Even with less oil being refined in this country, gasoline stocks have risen above 200-million bbl. for the first time. This makes it very difficult to smother the price wars that have been flaring.

Refineries won't willingly go on paying today's prices for crude if their "money product" is subject to price slashing. For it still is gasoline on which they rely for most of their profit.

Once oil starts flowing more or less normally from the Middle East, U.S. importers will increase the flow into this country. And then you'll hear the loudest howl ever from our independent producers.

Currently, these independents are pumping more crude oil than ever before at the best prices in many years.

BUSINESS OUTLOOK (Continued)

BUSINESS WEEK

When they are faced with cutting production to accommodate imports, they'll besiege Congress for quotas on foreign oil. And importers' past record of exceeding voluntary limits will be damaging.

It will be hard to argue, "Let's import to save our own reserves."

The siren call of oil in the ground is muted when drilling costs are the highest ever, drill pipe most difficult to come by, the legal status of depletion allowances under fire again, and the selling price of any natural gas that may be found subject to federal regulation.

In any event, the 2,300 rigs now drilling in the U.S. and Canada are 200 less than a year ago and the lowest number since 1952.

This week's business news contained little to alter the tone of mild disappointment that has developed in the last two months.

The Dept. of Commerce's report on January operations of manufacturers confirms just what we all had been thinking: Very little was added to inventories by plants making durable goods.

Accumulation fell, actually, to a rate of about \$1-billion a year against more than \$5-billion late last year.

Value of goods shipped by durable goods factories remained very high in January. In fact, it has caught up with new orders.

Backlogs are large enough (nearly \$60-billion) so that the present rate of operations could be sustained for about four months without any new orders. Just the same, it is never as exhilarating to run even with new business as it is to see the salesmen outselling production.

And there's always the danger that a leveling off in new orders will prove the prelude to a dip (especially following a year like 1956).

Steel operations this week are scheduled at about 95% of capacity, a drop of another percentage point in a week.

At the same time, you begin to hear of a blast furnace being cooled for relining here and an open hearth or two going out of operation there. And this is accompanied by small, scattered layoffs.

Further layoffs also were reported this week in auto parts and appliances. And here's a footnote on troubles in TV and appliances:

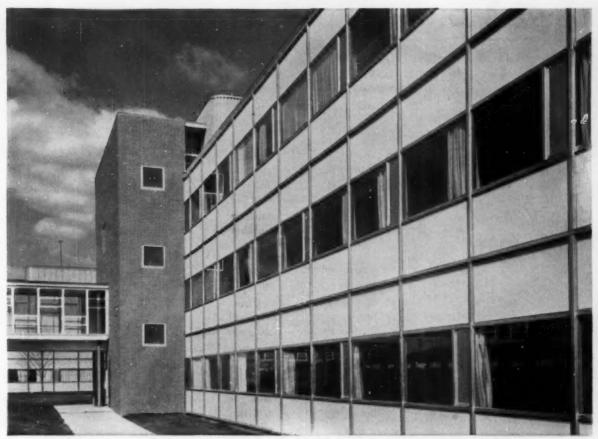
Directors of the Admiral Corp. took no action on the dividend ordinarily declared at this time. This TV and appliance maker had paid \$1 a share in both 1955 and 1956.

Even coal seems to have something of an inventory problem.

Exports are running comfortably ahead of a year ago, as expected. And a buying incentive has been present due to the promised price increase to meet the wage boost called for in existing contracts.

Yet production so far this year is 6-million tons behind 1956.

The holdings of the biggest user, the electric industry, give a clue: nearly 100 days' supply on hand (70 days' is more nearly normal).



Architect: Vincent G. Kling, Philadelphia, Pa.
General Contractor: Turner Construction Company, New York, N. Y.

Panel Contractors General Bronze Co., Garden City, Long Island, N. Y. Panel Manufacturers Ingram-Richardson Mfg. Co., Beaver Falls, Pa.

What a combination for curtain walls! Porcelain-enameled and Stainless Steel

The picture shows RCA's Cherry Hill Offices and Laboratories near Camden, N. J. There are 320,000 square feet of floor area, and curtainwall construction was used throughout. The richly colored porcelainenameled steel wall panels are supported by a bright grid of Stainless Steel mullions equally impervious to time and weather.

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of square feet of floor area were added beyond that available with masonry construction. Ordinary rainfall keeps the panels clean.

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BUSINESS WEEK

MARCH 9, 1957 NUMBER 1436



AGREEMENT on Israeli withdrawal by Maj. Gen. Burns (left front) for U.N., Maj. Gen. Dayan (right) for Israel, helped bring . . .

Fresh Start in the Middle East

That's what Washington sees coming out of Israeli step and Senate endorsement of Eisenhower Doctrine.

Now U. S. is prepared to switch pressure to Egypt to help bring about a reasonable settlement on Suez.

This week the Eisenhower Administration breathed easier about the Middle East than at any time since the Israeli-British-French attack against Egypt last fall. After four months that included verge-of-war tension, frantic diplomacy, and domestic bickering, it seems to Washington that the stage is now set for a fresh start in the Middle East.

Responsible for the new, though still cautious, optimism are two interrelated developments this week:

• Israel's decision to make a prompt withdrawal from Gaza and the Gulf of Aqaba area—a step taken when the U.S. moved in as a kind of arbiter between Israel and the United Nations.

The Senate's overwhelming endorsement of the Eisenhower Doctrine, with its commitment that the U.S. not only will resist Communist aggression but will also support economic development in the Middle East.

On top of these developments came Syria's agreement to allow the repair of damaged pipelines and the flow of oil to the Mediterranean.

 Question of Nasser—There still was no certainty as to what Egypt's Pres. Nasser would do next—whether he would reluctantly accept the new situation or gradually lead Egypt into economic self-strangulation. Already Cairo and Alexandria are in danger of losing their pre-eminence as commercial centers of the Arab world.

But even on Nasser there was some optimism in the State Dept. at midweek—enough so that Secy. of State Dulles could talk at a press conference on Tuesday of the possibility that the Suez Canal would be open for small ships in 10 days or so. Dulles wasn't by any means taking this for granted, however. He said Egypt had been dragging its feet on canal clearance, then told Nasser—in diplomatic language—that it was Egypt's turn to make a contribution to peace.

· Business View-Taking their own

readings of the situation, many U.S. businessmen are now feeling considerably better about things. With a canal opening, they see steadier commodity prices (page 19), fewer shipping bottlenecks, a more normal supply pattern for oil both in Western Europe and here in the U.S. Nothing that has happened this week, though, is likely to slacken interest on either side of the Atlantic in rushing round-the-Cape supertankers to completion, or in preparing plans for new Middle-East pipelines.

• Repairs—Meanwhile, there has been a distinct improvement in U.S.-French relations, achieved in part by the useful role Premier Guy Mollet played during his U.S. visit in helping to smooth the way for the Israeli withdrawal. The prospect is that the upcoming Bermuda meeting between Pres. Eisenhower and Prime Minister Harold Macmillan will be equally fruitful in repairing Anglo-American relations.

There is no blinking the fact that the U.S.-British rift over the Middle East goes very deep. There undoubtedly has been a basic conflict of interest between the two countries in the area, stretching back for almost 10 years. The differences still are very real. They are based on (1) a genuine conflict of interest between British and U.S. oil companies;

and (2) a bitter British resentment about the part played by the U.S., especially last fall, in forcing Britain out of the area. Still, there's no doubt that London is now ready to recognize the U.S. as the dominant power in the Middle East.

• U.S. Role—If any proof was needed of our dominant position, it was provided during the diplomatic drama that preceded Israel's decision to withdraw. Opposition to the withdrawal inside Israel was tremendously strong. At the same time, the U.N. General Assembly, with its two-thirds majority rule, was unable to function as an agency of compromise. It was only when the U.S. took over directly—on the one hand using pressure and on the other accepting new responsibilities—that the deadlock could be broken. (The U.N. had called for the withdrawal in several resolutions.)

The compromise formula, worked out on the Potomac rather than the East River, involved two things:

 U.S. support for Israel's "right of innocent passage" through the Gulf of Aqaba.

• Israel's agreement that the U.N. Emergency Force should move into Gaza, while the question of civil administration (formerly in Egyptian hands) should be left open.

• Test—The real test of U. S. policy under the Eisenhower Doctrine is still to come. It will be to bring the Nasser regime, or a new one, to reasonable terms with the West, with Israel, and with Egypt's Arab neighbors. This process can't go very far, of course, until Cairo (1) loosens its close ties with Moscow, and (2) clears the government of Communist stooges and fanatical nationalists. Washington isn't expecting miracles overnight. It is prepared to meet Nasser halfway—in return for far less than angelic behavior on his part.

• Draft Plan—What Dulles hopes for is a sensible attitude on Suez. By sensible he means something close to the interim plan that U.N. Asst. Secy. Gen. Kazin took to Nasser some days back, only to meet a refusal to consider it until after an Israeli withdrawal. The essence of the plan, approved by the U.S., Britain, and France, is in these

 An interim arrangement whereby Egypt would collect tolls but deposit a portion of them in a special World Bank or other neutral account as security against future claims, repair, maintenance, and so on. The percentage to be deposited remains open for negotiation.

 Reiteration by all parties—Nasser and the principal canal users—of continued adherence to the six principles agreed on in the Security Council last October. Agreement on the time and place for resuming negotiations for a final settlement of the canal issue, and on the framework within which negotiations would take place—probably the U. N.

• Consequences—If Nasser is prepared to accept these proposals, and meanwhile to open the canal and keep it open, the Eisenhower Administration might well unfreeze Egyptian assets here. With any encouragement from Congress, it might go as far as to consider renewing technical assistance in

The U.S. would expect Nasser to agree that Israel should take to the International Court its case for free passage of Suez. This, in turn, would bring up Egypt's right to maintain a state of belligerency indefinitely. (It's on this ground that Cairo has excluded Israeli shipping.) The U.S. would also expect Nasser to either drop his own case against Israel's right to free passage through the Gulf of Aqaba-or take it to the Court-but not to try to prevent passage. Then Egyptian claims to war reparations, and any claims by other countries against Egypt, would have to go to arbitration.

• Pressure—This seems like a tall order for a man who has behaved as Nasser has. Some U.S. experts, not to mention many British and French officials, don't think Nasser can swallow it. They suspect that international discussions on the canal will bog down in legal arguments. They have Nasser figured as a man who already is past the point of no return, who must go on to the end.

If so, Nasser will undoubtedly show his hand before long. Once he does, the U.S. will throw its weight against Egypt as it did against Israel. All sorts of new pressures will be put on Cairo. These pressures, in time, could be expected to produce a sort of economic self-strangulation in Egypt. There seems little chance that Moscow would bail Nasser out.

The one thing the U.S. won't use is force—barring, of course, Soviet military intervention. And the political or economic measures would be only those likely to gain the support of Egypt's Arab neighbors.

Diplomatic soundings this week in Arab capitals indicate that, except in Egypt and Syria, the U.S. still has pretty solid Arab support. There's evidence, for example, that Saudi Arabia, which has been losing substantial oil revenues, has thrown its weight all on the side of a quick canal opening.

• Shift-Probably the key to the situation is the greatly improved bargaining position of the West. Now that the U.S. has managed to supply Western Europe with something like 90% of its oil requirements, and is prepared to maintain the flow, Nasser has far less blackmail power.



Pitt Consol's Coal Pipeline Chokes Up

Pittsburgh Consolidation Coal Co. this week was still trying to figure out how to unplug a stoppage in its new \$12-million coal pipeline (BW-Feb.16 '57.p190).

The 10-in. 108-mi line, the first installation of its kind, runs from Georgetown, Ohio, to a terminus near Cleveland (above). The line serves a Cleveland Electric Illuminating Co. power plant.

The trouble arose when a 400-ton batch of coal got stuck a few miles south of the second pumping station near Carrollton, Ohio. It was understood the specific cause of the stoppage was oversize coal, which resulted from a malfunctioning of equipment that prepares coal for transmission.



PRES. EISENHOWER: "Wage increases that outrun productivity . . . are an inflationary factor. They make for higher prices."



RAYMOND J. SAULNIER, chairman of the Council of Economic Advisers: "The improvement in productivity appears to have been substantially less [in 1956]."



EWAN CLAGUE, BLS commissioner: "As nearly as we can tell, manufacturing productivity in 1954 and 1955 was substantially higher than the previous postwar average, but the increase in 1956 was small."

Productivity-The Hot New Issue

No one is quite sure how to measure it, and each side is interpreting it differently. A new committee is working on definitions and on speeding up the fact-gathering.

PRODUCTIVITY, which used to lead a quiet life in economic textbooks, is a fighting word in Washington these days.

It is being used to explain everything from rising retail prices (by Pres. Eisenhower) to the squeeze on corporation profits (by the Council of Economic Advisers).

Labor leaders say such talk is an effort to throw the blame for economic troubles unjustly onto unions. They accuse the Administration of not telling the true productivity story, and they have found a sympathetic audience among Democrats in Congress. Their main point: Productivity seems to have started a sharp upturn in the fourth quarter of 1956. They think this trend is continuing and will brighten the performance of the economy in 1957.

• Arguing Point—Productivity has thus become a controversial, emotion-charged, politically potent concept—in the same way that the cost of living and the index that purported to measure it became a hot issue during World War II and the early postwar years.

But even the experts can't agree on exactly what it means or how to measure it. One of Eisenhower's closest economic advisers—half in earnest—threatens to lay aside his heavy official duties to do nothing but study produc-

tivity "because nobody can tell me what we're talking about."

The arguing all started when Administration economists noted that productivity—as measured in output per manhour—apparently rose less in 1956 than it has on an average since World War II.

"The smallness of the 1956 gain contributed to the rise in unit labor costs and, in turn, to the increase in prices," the Council of Economic Advisers pointed out in the President's economic report to Congress.

I. Question of Definition

In testimony before the Joint Congressional Committee on the Economic Report, Ewan Clague, Commissioner of the Bureau of Labor Statistics, dug deeper into what happened last year. He also made plain what every productivity specialist in Washington acknowledges—that only the roughest sort of statistical tools are available for measuring productivity over the short run. Here's what Clague concluded:

Using the narrowest of the common measurements of productivity—output per man-hour of production workers in manufacturing—the 1956 gain seems to be either 2.5% or 1%, compared with an average of 4.5% a year.

The 2.5% gain for 1956 is indicated in the Federal Reserve Board index or production is used to measure output—a questionable method because some of the estimates that go into the FRB index are derived by making an assumption about productivity.

The 1% gain is indicated if a production estimate devised by BLS is used. This estimate is based on shipments of finished goods as reported to the Commerce Dept.

If all manufacturing employees are included—not just the production workers—the productivity gain, of course, is lower. Estimates for 1956 range from 1.5%, based on the FRB index, to no gain at all, based on BLS' own production estimate. These compare with increases averaging 3.5% a year for the 1953-55 period.

Broadening the work force to include all nonagricultural workers gives a still lower estimate for 1956: no gain in output per man-hour at all, compared with 3% a year in 1953-55.

II. Not the Whole Story

These estimates—geared to output per man-hour—are only part of the story. They measure productive efficiency solely in terms of labor, whereas capital in the form of machine tools, automation, and the like plainly plays an important role, too.

In a pioneering research project for the National Bureau of Economic Research, John W. Kendrick traced this broader concept of productivity from 1899 to 1953 by adjusting the manhour figures for increases in the stock of capital. He concluded that there was an average gain of 13% a year.

In his estimates, Kendrick uses the entire private labor force, excluding only government employees and the armed forces. Using these same concepts, he makes an estimate for 1956 that is remarkably close to that of BLS: a gain of less than 1%.

 Anomaly—This apparent slowdown surprised many experts, who had expected another year of solid gain because of the billions that business has been pouring into new and more efficient plant and equipment.

A combination of factors may ex-

plain what happened:

• Output showed only a moderate increase, about 2% or 3% when the effect of price increases is washed out.

 Many industries, such as those making capital goods, were at capacity when the year began and were unable to rack up increases.

 After two and a half years of uninterrupted boom, considerable inefficient equipment was in use, holding back the over-all performance.

• Labor's Theory—Labor economists—and their bosses—look on 1956 in a sharply different light. They do not argue much with the estimates for the year as a whole, but they insist that the fourth quarter showed a marked pickup. Along with everyone else, they stress the unreliability of short-term estimates, but they argue that their statistics for the fourth quarter are just as good as those used by the Administration for 1956 as a whole.

They believe productivity jumped something like 3% or 3.5% in the fourth quarter, compared to the same period a year earlier. They call attention to a 3-point rise in the FRB production index while hours of work showed a decline. They show the same

results for January.

Administration spokesmen have mentioned the possibility that after the pause of last year, productivity will gain in 1957. Labor spokesmen are saying that the pickup is already five months old, and that the Administration won't talk about it because it wants to use 1956 statistics as an argument against wage increases.

III. Finding Out for Sure

Nobody can say for sure what happened in 1956, because both sides must cite statistics in which they have little confidence. The Administration is making a major effort to do something about this. Kendrick—now a professor of economics at George Washington University in Washington and a Budget Bureau consultant—is heading an interagency committee that has been asked to recommend more reliable productivity estimates.

• First Problem—The committee faces some formidable obstacles.

First, it must decide on an over-all definition of productivity. This means agreeing on a method of measuring production on the one hand, and the labor force on the other. Next, the committee will try to work out better ways of obtaining the necessary data. Finally, it may try to speed up the estimates.

• Time Lag—At present, BLS has to wait three years for Census Bureau data before it can work out reasonably accurate estimates. This means it will be 1959 before a dependable story of what happened in 1956 can be told.

As long as productivity was mostly a matter of interest to economic historians, this lag didn't make any difference. But in its new role as a politically sensitive indicator of what might be happening to wages, prices, and corporate profits, something faster is needed. Kendrick believes the committee may try to agree on a productivity index that can be published quarterly.

He poses the technical problem this way: "Is it better to put out figures that are poor or to put out no figures at all?" Despite everything that can be done by way of improving data, productivity will remain difficult to measure. Some experts simply say it never can be done satisfactorily.

 Keeping Up—One problem is how to adjust production for changes in quality. Hours required to produce an auto, for example, not only decline, but the auto is improved at the same time. So results from one year to another are not comparable.

Changes in the product mix also confound the experts. A steel plant that makes fewer standard sheets and more special alloys may produce a lesser tonage, but may be making a gain in true productivity. The same is true of a company that formerly bought many components for its finished product and that decides to make its own.

• Variations—There are also wide variations in productivity by different industries. In Kendrick's long-range studies, 33 industry groups show an average gain per year of 2%. Manufacturing and mining are right on the average, transportation and utilities are considerably above it, and agriculture lags.

Even wider variations from the average exist for individual plants within

an industry.

To gather detailed information plant by plant, or even for industry groups, is more of a task than anyone in the Administration wants to undertake. Moreover, such an effort would be opposed by many industries. This means that, at best, the recommendations of Kendrick's group will still involve a lot of guesswork.

of guesswork.

"We can get better figures and get them faster," one committee member puts it. "But they'll still be a long way from anything as reliable as the BLS consumer price index, FRB's production index, or such standard sta-

tistics."





It Tracks a Plane's Jet Exhaust for the Kill

The Navy's new Sidewinder air-to-air guided missile has a deadly aim, thanks to a unique infra-red guidance system. Instead of using radar, the Sidewinder detects and locks onto infra-red radiation generated by hot jet exhaust gases and rocket motor flames from enemy planes. Then, like its rattlesnake namesake, it strikes fast. The infra-red guidance system makes it less vulnerable to electronic countermeasures—it can't be jammed.

The 9-ft., 155-lb. missile has a single solid propellant rocket motor. Developed by the Navy Bureau of Ordnance, it is produced by Minneapolis-Honey-

well, Philco, and General Electric. Its range is probably about five miles. Navy fighters could likely carry six on interceptor missions.

The infra-red guidance system is cheaper and less complex than the radar guidance of other air-to-air missiles. Sidewinder is believed to cost about one-tenth the \$24,000 tag of the Air Force's Hughes Falcon. The main reason is the simple electronics system-only seven vacuum tubes to Falcon's dozens. Electronics make up only one-sixth of total costs, compared with about one-third of total costs for Falcon and the Navy's Douglas Sparrow.

Antimerger Law Starts to Bite

- FTC examiner hands down a ruling that Crown Zellerbach must divest itself of St. Helens Pulp & Paper Co.
- This is the first time the 1950 law has been used to order a company to unscramble the eggs after a merger.
- The case undoubtedly will go to the Supreme Court
 and the end decision will be precedent-setting.

The first real decision against business under the 1950-toughened antimerger law saw the light of day this week

It is a clear-cut ruling by a hearing examiner for the Federal Trade Commission that Crown Zellerbach Corp., San Francisco, violated the antimerger law by acquiring a West Coast competitor, St. Helens Pulp & Paper Co. The examiner ruled that Crown Zellerbach must divest itself of the plant and timber rights it acquired.

There have been a few antimerger cases recently that ended either in the sale of some of the assets acquired or in restrictions on voting stock that had been acquired. But all of these limited results were achieved either by the Justice Dept. or by FTC—through negotiated, voluntary settlements.

• Precedent Setting—The Crown Zellerbach antimerger case, therefore, is the first in which a finding of "guilty" has been made over the protests of the company, and in which there is a legal order that the company must upset if it is to retain important assets.

The full FTC membership has the responsibility of upholding or overturning the examiner's ruling. If FTC upholds, the case almost surely will go to the federal courts. This will be the initial court test of a major weapon in the government's antimerger arsenal: the authority to enforce the unscrambling of corporate assets after they have been put together. As government antitrusters see it, court support for their power to force divestment of acquired assets is essential to their plans for stopping mergers or acquisitions that "may substantially lessen competition or tend to create a monopoly."

The Crown Zellerbach ruling thus will have wide importance as precedent for future cases. It ranks, perhaps, alongside the pending Bethlehem Steel-Youngstown Sheet & Tube case, which is testing whether the antimerger law can be used to halt a merger before it actually takes place (BW-Dec.22'56, p.30).

• Time Element-Of course, there will be no quick, final court rulings. Crown Zellerbach will first appeal the FTC examiner's ruling to the full five-man commission. Then the commission will decide whether to uphold, reverse, or change the examiner's ruling. The betting is that the examiner will be upheld—but that could be six months to a year away. And from the FTC through a court of appeals to a final decision by the U.S. Supreme Courtalmost a certainty in a case so important—could consume as much as five years.

Meantime, Crown Zellerbach will be free to use the property it acquired from St. Helens with no restrictions, except the possibility that sooner or later it will have to give it all up.

 Findings—Whatever the outcome, the battle still to come will be fought over the findings and conclusions of FTC examiner Earl J. Kolb.

Kolb's basic conclusion is that Crown Zellerbach's acquisition of St. Helens has substantially lessened competition and tended toward monopoly in the production and sale of coarse papers—which include special industrial paper, sanitary tissue paper, container board, cardboard, and other paper products—in an 11 western states area. This area includes Washington, Oregon, California, Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, and Nevada.

Before the 1953 acquisition, both Crown Zellerbach and St. Helens were integrated producers of pulp, paper, and paper products. Both owned timber reserves, conducted logging operations, and converted various papers into paper products as well as selling paper to independent jobbers and converters. According to FTC figures, Crown Zellerbach's total U.S. and Canadian sales before the acquisition were \$253-million. In 1955, the company's total sales were \$414-million. St. Helens sales totaled \$9.2-million before the

• Leader—Prior to the merger, Kolb says, there were three principal producers of coarse papers in the western states: Crown Zellerbach, with 51.1%; St. Helens with 12.1%; and Longview

Fibre Co. with 17.5%. After the merger, the 1954 figures show Crown Zellerbach (counting St. Helens production) with 64% of coarse papers production, and Longview with 17.6%. The elimination of St. Helens, Kolb claims, left independent jobbers and converters virtually at the mercy of Crown Zellerbach, and enhanced the company's already dominant position in the western market.

Kolb also points out that Crown Zellerbach is the price leader for the paper industry in the western market. And since Crown Zellerbach, in setting its western prices, follows the prices of eastern producers, Kolb says the company makes "certain that eastern producers cannot compete satisfactorily in the western market because of the necessity of absorbing freight in order to be competitive pricewise."

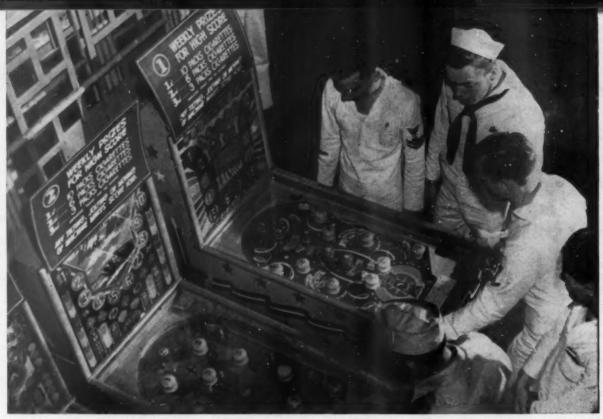
Even the move of the biggest paper producer in the country—International Paper Co.—to the West Coast market, Kolb ruled, is not likely to affect materially Crown Zellerbach's present dominant position in the West. International's acquisition of Long-Bell Lumber Co.—a preliminary step in its plans to build new production facilities in Oregon—is tied up in another FTC antimerger case (BW—Dec.22'56,p38).

Finally, Kolb rejected still another argument by Crown Zellerbach—that supply and demand estimates projected into 1975 indicate that the acquisition of St. Helens is not likely to impair materially future levels of competition. Kolb's answer is that this is only speculation, and ignores the probability that the company will continue to expand its own production to keep abreast of increased demand.

• Order—In his order, Kolb directs Crown Zellerbach to dispose not only of the assets acquired from St. Helens principally a papermill at St. Helens, Ore.—but also "all plant machinery, buildings, improvements and equipment of whatever description that has been installed or placed on the premises of the St. Helens plant by Crown Zellerbach."

Under Kolb's order, Crown Zellerbach has six months to complete divestment, during which time it could not cut or sell rights to timber formerly owned by St. Helens.

One of the major problems to be resolved—if Kolb's order is upheld—is who could Crown Zellerbach sell to? Crown Zellerbach might have difficulty finding a buyer rich enough to take the property off its hands who would not also run into possible antimerger trouble with FTC as a result.



PINBALL machines like these have developed into electronic marvels, but they're often targets of vice syndicates . . .

Caught in the Spotlight, "Games"

Senate's labor rackets hearing brings pinball machines, successors to "one-armed bandits," into glare of notoriety. The "amusement machines" trade prefers to have its booms quietly.

S ELF-STYLED vice operator James B. Elkins, from Portland, Ore., on the stand before the Senate's Committee on Labor & Management Practices, puffed out his chest and boasted last week: "A pinball machine in a good location can make you \$20 an hour."

With that, a whole industry shuddered. Elkins, testifying on gang-ster-union tie-ups in West Coast activities of the Brotherhood of Teamsters, turned the spotlight of notoriety on a business that has been getting by handily these last few years with little publicity—adverse or otherwise—to worry it.

This is the "amusement machine" industry—more than 50 manufacturers, some 15,000 employees. It makes the innocent "baseball" and "bowling" machines you'll see in some cities, such as New York (picture, right). But if you live in Chicago, Kansas City, Detroit, or a sizable number of other cities, you probably have seen the industry's favorite product, the pinball machine, in the corner stationery or drug store, the neighborhood tavern.

 Player's Choice—Some of them stand on four spindly legs, about waist-high, and take nickels. Others are coated with more chrome curlicues than a Cadillac, and feed on dimes and quarters. Some pay directly to the lucky—and skillful—player more than 20 times his risk capital. Most reward him with "free games," which he can cash in, at a nickel a game, with the tavern keeper or drugstore owner. Others pay nothing.

The chance of profit is so remote that pinball's more stable addicts (not those who play silently, alone, furiously determined to beat the house) feed in their small change with the expectation of winning side bets from fellow players. Since they don't care how heavily machine may be loaded against them-demanding only that its unfairness be constant-the machine becomes a sweet target for vice syndicates. And while anti-gambling laws have almost wiped out the old slot machine or "one-armed bandit," the pinball device that makes no direct payment keeps spreading because it isn't overtly illegal.

 Flourishing Trade—Headquarters for the manufacturing end of the business is in and around Chicago. There, half a dozen large manufacturers and dozens of smaller ones turn out just about all the coin-operated "amusement machines" in the U.S. Industry sources estimate these manufacturers produced some 300,000 coin-operated games last year, that one-third of these were pinball machines, costing from \$300 to \$700.

The industry's first pinball machines, turned out in the early 1930s, were simple gadgets that recorded a player's score with little fanfare. Today's models are as different from those of the 1930s as a Continental is from a Model "T" Ford. Lavishly decorated with chrome and glass, laced with intricate electrical wiring, fitted with flashing lights, they note each score and each award of a "free game" with clanging bells and shimmering lights.

• For Addicts—Lately, the industry has been concentrating on the type of machine that attracts addicts who seek to beat the house. This new model is a mechanical monster with more than the usual share of electrical circuitry. Put in one nickel and a combination of three numbers lights up. You have three choices at this stage: (1) Shoot the five balls and hope they'll strike the contact points bearing the appropriate three numbers—if they do you'll get one "free game," (2) feed in more nickels to get a larger combination of scoring numbers, or (3) feed in more



... SO CLEANED-UP communities ban them, permit only innocent "baseball" machines.

Industry Shudders

money to raise the odds-\$11 worth of nickels will frequently get you 300 to 1

"These new machines," say police gambling squad veterans, "feed on nickels like rats on cheese. They take in more than the old one-armed bandits.'

Probably the biggest company in the business is Bally Mfg. Co. It set up shop in Chicago in the 1930s, switched to munition fuses and electronic circuits during World War II. With the knowledge it gained in these four years, Bally was ready to make the most complex pinball machines after the war.

· Inside Industry-Beyond the manufacturers' doors, the industry is set up on fairly businesslike lines. The manufacturer sells to the 150 distributors around the country. The distributor sells in turn to the 10,000-odd operators. The operator negotiates with the storekeeper or tavern owner for a site for his machine. Finally, the customer gets his chance to play.

The normal deal between operator and storekeeper is for a 50-50 split of the machine's take. If the storekeeper pays off winners of "free games," the operator generally reimburses him in full.

A tavern keeper with a small but busy neighborhood bar can frequently cover his monthly light bill with his share of the machine's take. But if he's caught paying winners, he will, in many states, lose his liquor license.

· Crime's Openings-In a well-ordered community, the industry's setup remains inviolate. But if the law fails to keep close watch, the chain may be invaded. When a vice syndicate moves in, it's likely to become the operator of just about all that city's "amuse-ment devices." In cahoots with a corrupt labor group, it will use strikes to gain sites for its machines.

That there's money in the trade for the successful operator is clear from one series of notations from the books of the St. Louis police. There last month, operator John J. Vitale lost more than \$7,000 in three separate robberies from his office. All the cash came from collections taken from his machines.

· Skill and Chance-Publicity of any kind troubles the industry. More and more, communities are outlawing pinball machines altogether. The means for outlawing them is generally to declare them a game of chance, not of skill, thus invoking anti-gambling laws. Not long ago, St. Louis attempted this, but failed. Gambling squad police -who play the machines in taverns, try to win, and then prosecute the tavernkeeper if he pays them for winningtestified that they trained on confiscated machines to develop enough skill to win when playing in line of duty.

New U. S. Loan

Treasury finds it must borrow \$2-billion or \$3-billion after all, and must do it before the end of March.

The U.S. Treasury, its cash balances down to the lowest level in years, decided this week it would have to borrow between \$2-billion and \$3-billion in new cash before the end of the month-just when tax receipts start

pouring in.

Both Treasury Secy. George M. Humphrey and Under Secy. W. Randolph Burgess had hoped to avoid going to the market to borrow (BW-Feb.23'56,p85). They had already increased the weekly offering of 91-day Treasury bills, which has provided an additional \$900-million in the past two months. They had also asked Congress to raise the interest rate on savings bonds to help stem the increase in redemptions. And they were counting on the flow of tax receipts after Mar. 15 to tide them over until April.

· Drain on Cash-But for the past few weeks the Treasury has faced an ever increasing drain on its working balances. Sales of Series E savings bonds have failed to pick up despite the promise of a retroactive hike in interest rates when Congress approves. Cash-ins of Series F and G have soared. On top of that, the Treasury in the last week of February had to pay out some \$875million to holders of maturing marketable securities who preferred cash to an exchange for a new issue.

This drain on cash was made worse by a rising level of government expendi-

tures, particularly for defense.

• Added Trouble-The Treasury's need for cash comes at a time when borrowing for taxes is heavy. This complicates the job of the Federal Reserve.

Although the Fed is still pursuing a restrictive policy, it accommodates the seasonal demands for tax borrowings made by corporations. Now it also faces an extraordinary demand for extra funds by the Treasury. Thus, it may temporarily have to supply more funds to the market than it had planned on. This may make for easier conditions unless it acts aggressively after the Treasury has obtained its funds.

No final decision has been made on just how much the Treasury will borrow, but spokesmen figure it will probably be around \$2.8-billion. Nor has the Treasury decided on what kind of issue to offer. This decision will not come until after Humphrey and Burgess have met with official banking groups as well as with institutional investors.



Ralph J. Cordiner (above) heads a group proposing radical answers to the military's mushrooming need for experts. He's been . . .

Mapping Plans to Keep Technicians in Uniform

FOR YEARS now, man-hungry industry recruiters have been using the armed forces as a preserve for hunting skilled electronic and aircraft talent. Uncle Sam supplies the training for the experts—and, as soon as possible, industry lures them out of uniform to work in

greener pastures.

This week, an advisory committee to the Pentagon is putting finishing touches to a revolutionary plan to endor at least slow—this process. Headed by Ralph J. Cordiner, president of General Electric (picture), the 11-man committee has been at work since last May. It has come up with a series of major—and costly—proposals, all designed to help the military services hang on to much-needed engineers, scientists, and technicians, including those in the civilian employ of the Defense Dept.

• Change—This would never have been

a problem in the old days of warfare, when an army's most important ingredient was the foot soldier. But today's military establishment is so intensely mechanized and mobilized that the premium is on the technician. And with equipment becoming more and more complicated, it will soon be more so.

The committee's formal report on what to do about this situation is due out later_this month. Right now, it is being held up while the Eisenhower Administration debates how much of it to buy.

• Prescription—Meantime, though, the most important proposals have been leaking out, including recommendations that:

 The traditional military pay system be scrapped, and merit replace longevity of service as the main basis of promotions for military personnel.

• The military pay structure for enlisted men be increased from seven to nine different grades, to provide more flexibility in pay for technicians.

 Proficiency bonuses, amounting to one or two grade increases, be paid to enlisted men with the most critical job skills—this could cover up to 15% of

the total enlisted strength.

 Pay rates for senior officers be boosted to bring salaries more in line with industry rates for jobs with comparable standing and authority.

Across-the-board pay raises averaging 12% be granted to civilian professionals and technicians employed by the Defense Dept., with similar in-grade pay boosts to military personnel.

The committee also suggests that requirements for military technicians could be reduced through increased contracting with civilian companies to handle maintenance and operation of military equipment (BW-Oct.20'56, p186). Defense Secy. Charles E. Wilson, however, is cool to this idea—he's worried the scheme could turn out to be what he calls "a device for paying more for the work."

• Comment—Cordiner's proposals have stirred up both controversy and enthusiasm in Washington circles. For one thing, there's the cost angle. The Pentagon estimates the proposals would add at least \$575-million to the new military budget's total of personnel costs, now estimated at \$10.4-billion. Hikes for civil service professionals would cost another \$150-million.

Then there's criticism from old-line military men that the special privileges proposed for technicians—notably, the de-emphasis on longevity as the basis for promotion—would upset military traditions and generate morale problems

among line soldiers.

Still, most observers agree that military manpower troubles have become serious enough to justify some important changes in personnel policy. The growing complexity of new weapons has created a new respect for technology in the military services and accentuated the demand for skilled specialists.

• Bigger Slice—For instance, 44% of the services' enlisted ranks are now classed as technicians and mechanics. At the end of World War II, such men made up only 34% of the total force. The largest increases have been for maintenance of electronics and armaments systems. The percentage is likely to increase another 10% in the next decade.

Yet the turnover of technical personnel is fabulous. Only about 10% of men with so-called "hard-core" skills—electronic maintenance men, engine repairmen, and the like—reenlist after finishing a first hitch in the service. For men with lesser job skills—such as cooks

and truck drivers-the reenlistment rate after initial tours of duty is 22%.

The Pentagon estimates that it spends up to \$40,000 each over three years to train certain types of electronic specialists and needs a reenlistment rate of 33% for such technicians if a stable work force is to be economically maintained

Commenting on the high turnover of skilled military technicians, the Cordiner committee says: "It is foolish for the armed forces to obtain highly advanced weapons and not have men of sufficient competence to understand, operate, and maintain such equipment.'

• Disparity-Inequities suffered skilled technicians under the present military pay system, with its emphasis on longevity, are illustrated by the committee through this example:

A top-notch Air Force electronic specialist with the grade of technical sergeant earns a base pay of \$195 monthly after five years' service. With a wife and two children, he also receives a \$96.90 monthly allowance for quarters and \$30 for rations.

At the same time, a cook with the grade of staff sergeant, one rank below the electronics man, earns a base pay of \$210.60 monthly because he has twice as much service. Ration and quarter allowances (based only on the number of dependents) are the same.

A preliminary Cordiner committee report points out that a military radioradar maintenance man holding the rank of corporal, with no dependents, has an annual net income of only \$1,569. That's less than the \$1,824 net cash income estimated for any single unskilled civilian under the federal government's minimum wage law.

· Fate-Whether the committee's proposals will come to anything is another question. The Administration would like very much to embrace them all. But with Congress anything but friendly toward new budget costs-and government spending on the increase anyway-it's reluctant to show too much enthusiasm.

In this climate, it's very unlikely that the Administration would suggest 12% pay boosts just for the Defense Dept.'s roster of civil service employees in professional and managerial spots. Civil service people in other agencies would protest. And there's no sign of support for such a large-scale wage increase across the board.

However, the proposals to enhance the stature of technicians-through such devices as proficiency bonuses and extra pay grades-stand a good chance of De-

fense Dept. approval.

The upshot may well be this: Most of the Cordiner recommendations will be duly accepted by Secy. Wilson, lauded-and then put on the shelf for future consideration.

Financing Oil for France

Old device of banker's acceptances is revamped to allow dollar-short French to get a \$100-million credit for buying U.S. petroleum products.

A new use for an old financing device was arranged this week to enable dollar-short and oil-hungry France to get \$100-million in credit to buy petro-

leum products.

Under the arrangement, a group of French banks, headed by Lazard Freres et Cie., and a group of American banks headed by Chase Manhattan, have agreed to float \$100-million in shortterm banker's acceptances in the New York money market that will be used to finance French imports of petroleum. These acceptances, which generally mature in 90 days, can be renewed until December, 1958.

Banker's acceptances are an old device for financing export-import trade, and have generally been more widely used in Europe than in the U.S. A banker's acceptance is a trade bill for exports or imports that is accepted by a bank, which means that the bank guarantees payment on it. The guarantee of the bank makes the acceptance as readily salable as any other short-term paper in the open market at posted rates-currently 31% for a 90-day bill. · Big Rise-At present, there is about \$1-billion in banker's acceptances outstanding in the U.S., the bulk of it in cotton and tobacco exports. The \$100million that will be used for exports of oil to France means a big rise in the acceptance market. But dealers in acceptances doubt that the new agreement will mean a full 10% addition to the acceptances outstanding or that this instrument will be utilized more broadly by other dollar-short nations.

Chase Manhattan and the other American banks participating in the deal chose acceptances because this permits them to make credit available to the French without having to diminish their own hard-pressed reserves. Ordinarily, they would have made a straight loan, but the Federal Reserve's restrictive monetary policy is currently limiting the banks' capacity to make loans. When and if credit eases up, there will be no reason to prefer acceptances.

Then, too, acceptances have a seasonal pattern. The market generally hits a peak in the summer and fall, when cotton and other crops are exported, then drops off in the winter and spring. Thus, the French acceptances, which are expected to be coming into the market later this month, will bolster a declining market rather than add to an overloaded one.

· Demand Seen-According to accept-

ance dealers, there will be a good demand for the French bills. Actually, the bulk of acceptances are bought in the U.S. by foreign investors-mainly foreign banks and insurance companies. They're familiar with acceptances as a credit instrument and continually keep a portion of their dollar accounts in 90-day acceptances.

Generally, the rate on banker's acceptances is in line with other shortterm money rates. But if the supply is greater than the demand for them, the rate may have to be increased. Even though the French acceptances may mean a substantial addition to the amount outstanding, acceptance dealers do not think this will change the rate.

The man most responsible for the arrangement is Chase Manhattan's Alfred W. Barth, a vice-president in the bank's international division. As chief participant for the Americans, he worked with the French banking house of Lazard Freres, which had been designated by the French government to carry out negotiations for a loan.

· Letter of Credit-This is the way the arrangement will operate: A French importer of oil products will get a letter of credit from one of the French banks participating in the scheme. The French bank will send the letter to the participating American bank, which will inform the U.S. exporter that a credit has been arranged for the sale of oil to France. The exporter's bank will then stamp its acceptance on his trade bill which shows, say, a \$500,000 sale to the French. This bill can then be sold in the U.S. by the exporter at the current 31% discount plus a standard 1½% service fee charged by the bank. This would immediately net the exporter \$475,000 in cash.

There is a double advantage for the American banks in the scheme. They are able to provide a large amount of credit without any real change in their balances. Moreover, they will be getting a 11% profit on each transaction. · Stiff Cost-The French, who eventually have to remit dollars to cover the cost of the oil, will be paying 5%-the 31% discount plus the 11% service charge. This is a substantial interest cost, but bankers point out that a straight loan at the prime rate of 4% would probably require keeping 20% of the balance on deposit, which also amounts to 5%. The French banks, of course, get a fixed fee for providing letters of credit to French importers.

Battle Over Atomic Power Plants

- The hearings just completed didn't settle the issue of whether federal or private industry should build reactors.
- Rather, they served as a warm-up for next month's round on legislation requiring the Atomic Energy Commission to build power plants for the government.
- But one major point emerged: The U.S. may need two separate atomic power programs.

The Administration and its Democratic critics have squared off for this year's important fight over who is to build our future atomic power plantsprivate industry or the government.

At the close of two weeks of testimony from government and industry before the Joint Committee on Atomic Energy (BW-Mar.2'57,p137), you could chalk up these major points:

· The country may need two separate atomic power programs-one to develop equipment that we can sell now to power-short foreign buyers, and another to concentrate on developing reactor technology for the U.S., which doesn't now find atomic power economically feasible.

· Estimates of costs of completing commercial atomic power plants are skyrocketing-and completion dates generally are inching farther into the

future.

· These and other factors seem to be favoring the Democrats who-all along-have been pushing for federally built plants as the only way in which U.S. atomic development could keep pace with that of other countries and meet our own future needs.

 Lurking in the political shadows is the possibility of a Democrat-pushed deal. Democrats will vote the government liability insurance that private companies say they must have before embarking on an atomic power program—but only if the Administration goes along with at least a start on a program for federally built, owned, and

operated plants.

· Big Issue-One of the big issues underlying the confusion over where we are and in which direction and how fast we should go is that of public vs. private power. If private utilities build the atomic plants, they'll market the power without federal interference. Legislation directing the building of atomic power plants by the Atomic Energy Commission would, almost surely, include the so-called "preference clause," which gives cooperatives, municipal systems, and the like first call on the power produced. This is one fight

the private electrical industry has been battling for years.

The hearings just concluded—a legally required review of the state of all our civilian atomic programs-concentrated almost entirely on the power issue. They served as a warm-up for another set of hearings due next month on specific legislation introduced by Sen. Albert Gore (D-Tenn.) that, if passed, would require AEC to build power plants for the government (BW-Fcb.16'57,p41).

· The Record-AEC Chmn. Lewis L. Strauss, leading the Administration forces that appeared before the Democratic-controlled Joint Atomic Energy Committee, spelled out why the Administration feels its program is just about

what the country needs:

• In 1957, some \$270-million will be spent on civilian and military power reactors.

· The industrial art has advanced so that AEC has withdrawn completely from the fabrication of fuel elements for reactors.

· Ultimatum-The real brass tacks controversy flew around AEC's so-called third round invitation to industry, issued in January as the Administra-tion's answer to charges that it was dragging its feet. Strauss laid down a hard promise: If industry doesn't build the number and kinds of reactors specified so they'll be operational by June 30, 1962, then AEC will ask Congress for authority to build them. Roughly, private utilities have until the end of this year to commit themselves.

Proposals so far publicized to meet

this demand show:

• The Florida Nuclear Power Group-made up of Tampa Electric Co., Florida Power & Light Co., and Florida Power Corp.-hopes to propose a natural uranium reactor to cost about

 Pennsylvania Power & Light Co. and Westinghouse Electric Corp. have an aqueous homogeneous reactor proposal that may be ready to meet the target dates.

Others showing an interest include

Carolinas-Virginia Nuclear Power Associates, an Ohio group headed by American Gas & Electric Co., and Pacific Gas & Electric Co.

Democrats showed by their questioning of Strauss and the other commissioners that they think too many of these plans are all too vague to satisfy

their demands.

 The Climbing Costs—Cost estimates spread on the record, the Democrats claimed, support their contention that atomic programs will continue to slide unless the government puts up the

These were the figures disclosed:

· Consolidated Edison Co. of New York now anticipates total plant cost of \$70-million rather than \$55million for its pressurized water reactor plant. There have been design and construction plan changes and the capacity of the plant has been increased from 250,000 kw. to 275,000

· Costs of the Shippingport plant of Duquesne Light Co. and AEC have increased from an estimated \$37-million to something close to \$55-million.

- · Yankee Atomic Electric Co. reports that costs for its plant will exceed the original estimate of \$35-million by a "substantial margin." The company says power costs now are figured at 12 to 14 mills per kwh. instead of 10 to 12
- · Costs of the Consumers Public Power District project in Nebraska reportedly have almost doubled. On the Wolverine Electric Co-op project at Hersey, Mich., they have increased about 25%.
- · Foreign Market-Some of the confusion about the success or failure of the U.S. programs stems from failure to recognize the differing needs of the U.S. and countries abroad, said AEC Commissioner Harold Vance. plain fact of the matter is that we need two programs instead of one. We need one for ourserves and one for our foreign friends, each tailored to fit a different set of circumstances."

· Argument-The Democrats, who agree on the importance of the foreign market, say this bolsters their argument for a federal program. This, they contend, is the quickest way to demonstrate and prove out large-scale plants for potential foreign buyers.

Not so, says Strauss. He claims the U.S. today is the only country exporting reactors, that U.S. companies have contracted for or are negotiating for at least six power reactor contracts and about 13 research reactor contracts.

Sen. Gore said the Japanese had decided to go to England for a large



These 15 friends of Mr. Friendly have something to sing about!

COMPANY	NO. OF YEARS	TOTAL SAVINGS ON INSURANCE
Sprague Electric Co	8 yrs	\$287,553
Acushnet Process Co	8 yrs	227,083
Continental Mills	8 yrs	66,000
The Lionel Corp	5 yrs	165,995
Utica Drop Forge & Tool Corp	10 yrs	242,000
Keasbey & Mattison Co	6 yrs	418,968
Heintz Manufacturing Co	9 yrs	465,912
W. C. Hamilton & Sons	8 yrs	83,613
The Freiberg Mahogany Co	7 yrs	49,907
Avondale Mills	7 yrs	135,000
Alice Manufacturing Co	6 yrs	63,555
Huttig Sash & Door Co	6 yrs	135,644
The Midland Steel Products Co	6 yrs	329,654
Barber-Colman Co	6 yrs	454,471
Sealed Power Corporation	6 yrs	164,767
TOTAL SAVINGS FOR AL	L 15 COMPANIES	\$3,290,122

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Savings opportunity from substantial dividends!

*Difference between manual rates for these industries and premiums actually paid by these companies for number of years shown.

Good reason, too, for these leading firms have saved \$3,290,122* through safety programs and American Mutual dividends.

As you can imagine, the total savings figure of over 3 million dollars that Mr. Friendly has helped these 15 firms realize has been music to their ears—and to his!

It's all the result of some close harmony between the several companies and American Mutual Safety Engineers in setting up and operating effective accident prevention programs. This has meant reduced premium rates . . . and in addition, there is American Mutual's practice of paying annual dividends to policyholders. Total dividends to policyholders since 1887 now exceed \$196,000,000.

Why not let Mr. Friendly show you how to practice safety to the tune of savings like these—in people, morale, dollars?



Send for free brochere. Mr. Friendly will be more than happy to send you his brand-new brochure called "HOW 15 COMPANIES SAVED \$5,000,000." It's absolutely free and without obligation. Just write: American Mutual Liability Insurance Company, Dept. BW-3, 142 Berkely Street, Boston 16, Mass.

Mr. Friendly in American Mutual's trademark symbolizes the spirit of cooperation and service typical of American Mutual Representatives everywhere.



power reactor instead of buying a U.S. unit. Strauss claimed the latest information is that the Japanese have not committed themselves and are coming back to reexamine the U.S. situation.

• New Sales Pitch—This week, the British government advanced a new selling point by announcing that it would triple production of nuclear energy for industry by 1965, at an estimated cost of over \$2.5-billion. This program would far outpace that of the U.S., which puts the emphasis on developing atomic reactor technology rather than on actual production of electricity.

The British, who must contend with high-cost conventional power, dwindling coal reserves, and fuel imports, aim to develop large-scale atomic power output as soon as possible. The goal now is 20 nuclear power stations with a total capacity of between 5,000 and 6,000 megawatts by 1965. This, according to the government, would save about 18-million tons of coal per year.

The program will be financed by

English and Scottish electricity authorities, and by loans from the government.

• Roadblock—Vance told the committee the major roadblock to opening up the huge potential foreign market for power reactors is not any lag in U.S. reactor technology, but rather a matter of fuel. Since U.S. reactors are based largely on enriched uranium, foreign purchasers of American reactors would be dependent on this country for future fuel supplies, for chemical reprocessing of spent fuel elements, and for repurchase of plutonium and other fission byproducts.

'The commissioner suggested that consideration be given to offering long-term guarantees to foreign countries to assure them of continuity of fuel supplies and services for the foreseeable life of a reactor.

• The Outlook—In the wrestling to come over the Democrats' drive for a federal program, one compromise idea will be getting some additional attention. That's the proposal—brought up again by the AEC's dissenter, Commissioner Thomas E. Murray—that AEC build reactors and use the power to supply needs of its own plants. This would avoid a clear-cut decision on the preference clause, perhaps the thorniest political issue in the whole bundle.

• Backers—Actually, the Democrats got an assist from at least one industry spokesman. Dr. Chauncey Starr, general manager of North American Aviation's Atomic International Div., said the economics of the electric utility industry do not permit continuous support of the kind of development program needed. To him, this means that AEC financial backing "must inevitably continue for some years as it has in the past."



Mexico City's Colorful Street Bazaars . . .



. . Are Yielding to Modern Indoor Markets

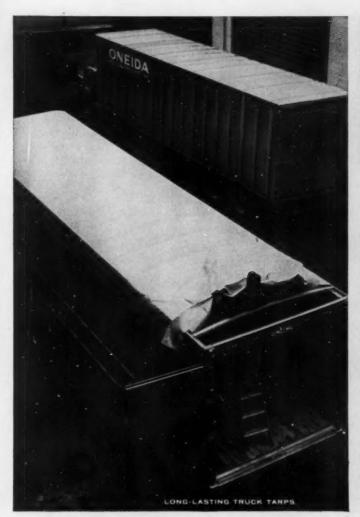
Native street bazaars have lined the streets of Mexico City since before Cortez invaded the halls of Montezuma in 1519. They have long been a big tourist attraction in the city. You could buy anything from live turkeys to tropical fruit from Indian peddlers in native dress.

But change is catching up with the centuries-old institution and driving the "commerciantes" off the cluttered streets and into new indoor market buildings. During 1955 and 1956, the city constructed 23 new markets like the one shown in the lower photo. Total cost was \$4.6-million. This year, 30 new markets will be undertaken, costing \$11.6-million. And some 15 to 20 more market buildings are being studied for 1958.

The city fathers agree that the old markets were colorful. But they also feel they are unsanitary and resemble mob scenes more than organized enterprise. The new buildings water. Many of them also have refrigeration and supervised recreation areas for the children of the vendors.

Two of the more colorful native bazaars slated to be moved inside this year are La Merced (top photo), the city's largest market, and La Launilla, known as the "Thieves Market."

Many of the Indian peddlers admit the ordered rows of stalls in the new buildings will grant them more dignity, but feel doing business won't be so much of a social outing as it was at the curbside.









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Today, protective covers of coated nylon are used by hundreds of businesses. In uses ranging from open-top truck covers to theater tents and waterproof fabric for children's wading pools, coated nylon fabrics are lightweight, durable and more economical in the long run.

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even when they're used at sub-zero temperatures.

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In Business

McCardle, Ex-State Dept. Official, Joins Silberstein as Special Assistant

Leopold D. Silberstein, chief of Penn-Texas Corp., which is waging a proxy fight for control of Fairbanks, Morse & Co. and at the same time resisting an internal proxy attack (page 74), has a new special assistant. He's Carl W. McCardle, Asst. Secy. of State for Public Affairs in the Eisenhower Administration who resigned last week. McCardle came to the State Dept. from newspaper work; he headed the Washington bureau of the Philadelphia Bulletin.

Meanwhile, Silberstein has filed with the Securities & Exchange Commission data on the acquisition of 91,750 shares of Fairbanks stock, under an agreement last July with Discount Bank (Overseas) Ltd. of Switzerland and

Simon Jaglom, an importer.

Penn-Texas, he said, agreed to buy the stock from the Swiss bank and Jaglom at \$47.75 a share, on call before Jan. 11. Then Silberstein arranged for the bank and Jaglom to buy the shares they were to sell from various holders through Strauss & Co., New York brokers.

AEC Shuts Down Sodium-Cooled Reactor: Navy Had Rejected That Type of Power

The Atomic Energy Commission has shut down its sodium-cooled power reactor at West Milton, N. Y. The reactor was the prototype of the propulsion unit that caused so much trouble in the submarine Seawolf (BW-Nov.17'56,p44). The shutdown at West Milton follows closely on the announcement by the Defense Dept. that it had abandoned this type of reactor for use in naval

The West Milton reactor has been operating since May, 1955, and has produced about 2-million kwh. of electric power. Since last July, it has supplied some 765,000 kwh. to Niagara Mohawk Power Corp. at a price of 3 mills per kwh.

Omnibook Ceases Publication, Blames Its Woes on Own Format

Another magazine-type publication went down the drain this week when Omnibook-which presented boileddown versions of the works of popular writers in a pocketbook-sized format-merged with Books Abridged, Inc., a bi-monthly that does much the same thing as Omnibook, but in book form.

Omnibook was born in 1938, and at one time had nearly 1-million subscribers. This had dwindled to about 125,000, a loss ascribed by editor Maxwell M. Geffen to the unpopularity of the small magazine format. Geffen also pointed out that the small size created difficulties with advertisers, who tend to balk at preparing special

Books Abridged, which will take over Omnibook's subscribers, claims to be doing very nicely. Books Abridged was started in 1954 by Omnibook and the Book-of-the-Month, which later sold out to its partner.

Other corporate woes: The stockholders of Pressed Metals of America, Inc., this week gave their directors the authorization they sought to sell, lease, or exchange the property and assets of the auto supplier (BW-Mar.2'57,p167). John D. Leighton, Pressed Metals president, promptly resigned and will try to organize a group to buy the company, which has been beset by losses and an unfavorable earnings outlook.

Business Briefs

"Still pretty strong." That's how the Federal Reserve Board described consumer installment debt, despite an unexpectedly steep drop in January. On-the-cuff buyers owed \$254-million less at the end of the month than at the start. The year before, the January drop was \$134million; in the 1955 month it was \$52-million.

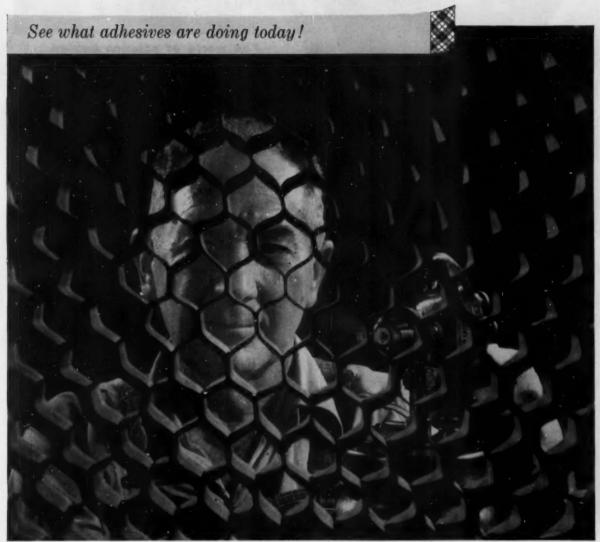
Gold and dollar reserves of the sterling area climbed to top \$2.1-billion in February, a rise of \$63-million despite the drain of the oil crisis. But a big part of the gain was due to a receipt from India.

The upward march of prices: The Agriculture Dept. says consumers will have to pay a little more for meat in 1957 than they did last year. . . . Sylvania Electric Products, Inc. has added \$50 to the price of all its color television sets. . . . Pittsburgh Standard Conduit Co. has raised prices of rigid steel conduit an average of 3%.

Farm surpluses held by the government in January were below year-before figures for the third month in a row, despite a seasonal rise. The Agriculture Dept said that on Jan. 31 it had nearly \$8,361-million tied up in price supported commodities.

Expansions and improvements: Chmn. Eugene G. Grace says Bethlehem Steel Corp.'s \$300-million, twoyear expansion should be pretty well completed by the end of this year. The goal: total ingot capacity of 23million tons a year. . . . Consolidated Edison Co. of N. Y. plans \$146.5-million in new construction this year. . . . Kennecott Copper Corp. has an \$18-million improvement program this year at its Utah Copper Div., in addition to \$12-million already allocated to a new tunnel at the Bingham mine. . . . Ideal Cement Co. expects to spend between \$10-million and \$12-million on a new cement manufacturing plant at Albuquerque. Plans call for an initial 1-million-bbl. capacity, which could be doubled quickly if need arose.

Oklahoma's oil allowable for March was boosted by 10,000 bbl. a day-to 640,000 bbl.-by the state Corporation Commission. Something like a third of the increase will be allotted to new wells.



WHEN THIS MAN SQUEEZES THE TRIGGER, HE CUTS PRODUCTION COSTS. HIS SPRAY GUN IS LOADED WITH A MODERN ADHESIVE BY 3M.

Shooting holes in production costs

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3M adhesives like EC-1357 and EC-1177 bond a honeycomb paper core between thin metal skins. They produce rigid, more durable units from such light materials because they're tougher, more flexible. Many industries benefit: building, furniture, aircraft, railroad equipment and others.

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SHEETINGS . "3M" ABRASIVE PAPER AND CLOTH . "3M" ADHESIVES AND COATINGS . "3M" ROOFING GRANULES . "3M" CHEMICALS



Being interviewed is H. A. Fuggiti, Acting Senior Development Engineer

"Here's where the heavy slugs of power come from"

At the Exide Laboratories - Reporter: Just exactly what part of the battery is that, Mr. Fuggiti?

area?

Fuggiti: This is the Exide-Ironclad positive plate. And in any battery, power reserve is

governed by positive plate area. Reporter: Then do you mean that Exide-Ironclad Batteries have more positive plate

Fuggiti: Exactly. You can see that here. The cylindrical power tubes are arranged in a row. So the semicircular sides give an effective plate area one-third more than the plate size.

Reporter: How does that increase power

Fuggiti: Because there's a bigger working

surface of battery plate exposed to the electrolyte. Power response is faster.

Reporter: What does this mean in battery performance?

Fuggiti: It means the battery can provide power to spare for peak power loads as well as a dependable source for continuous loads.

Reporter: Obviously this is an important feature of the Exide-Ironclad Batteries.

Fuggiti: Yes it is, but it's just one of many engineering details that contribute to their long life and high capacity.

Note to battery users: Whenever you order heavy duty batteries or the equipment that requires them, be sure to specify Exide-Ironclad. For detailed bulletin, write Exide Industrial Division, The Electric Storage Battery Co., Philadelphia 2, Pa.



WASHINGTON OUTLOOK

WASHINGTON BUREAU MAR. 9, 1957



Washington talks more and more of a leveling out of business, rather than another year of sustained rise with a serious inflation threat. Here's the way some key Eisenhower advisers see the outlook, as spring nears:

It will be a big year, with record consumer income and continued big spending by business for plant and equipment pushing total activity into new high ground. But there's a softening of earlier forecasts.

The rise is expected to be limited. Using gross national product as a yardstick, government economists estimate the first quarter of 1957 is running at an annual rate of \$426-billion, maybe a little more. That's \$13-billion over 1956. But it's only \$2.2-billion above the 1956 fourth-quarter rate. So what's seen is actually a sidewise movement, with business on a very high plateau—perhaps \$432-billion GNP for the year—but without the upward thrust of the past two years.

As for inflation, the threat that the Eisenhower Administration thought it saw back in the winter is being written down. In fact, a reporter today seldom hears any official reference to it. This doesn't mean that there won't be further price rises. There will be, as built-in wage raises and other cost factors put pressure under prices. But officials now feel that the price up-push of last year is losing some of its drive.

A new appraisal of plant and equipment spending prospects is expected from the Commerce Dept. and the Securities & Exchange Commission shortly. Here's the general picture it's expected to paint:

The rate for the second quarter will be about \$38-billion. That's up just a little from the fourth-quarter rate of \$37.3-billion and the current quarter's estimated \$37.9-billion.

The rate for the rest of the year will hold close to this level. In 1956, by contrast, the first-quarter rate was \$32.8-billion and was followed by quarter-to-quarter gains to the \$37.3-billion fourth-quarter rate. The year as a whole added up to \$34.9-billion, nearly \$6-billion higher than 1955. If this year comes out at around \$38-billion, the gain will be less than half that recorded last year. Still, the total will be very high and a major support under the economy.

Consumer spending is expected to stay on the rise, fed by relatively plentiful jobs at the higher pay rates set by the 1956 round of wage boosts. So far, there is no sign that the consumer intends to curb his spending, but there is considerable thought that the lack of interest shown in consumer durable goods such as appliances and autos last year may continue.

There's concern about the auto outlook. New cars sold pretty well in January—at an annual production rate of 6.4-million. But there was a decline in February to an estimated 6.2-million rate.

March usually tips off the outlook for autos. Industry and government forecasters figure they will know by Apr. 1 whether sales for the year will come close to the earlier estimates of 6.5-million, or wind up closer to last year's sales of just under 6-million cars.

On housing, there's still a big debate over the outlook. Government men still talk of "somewhere near" 1-million starts this year. Many builders think in terms of an even lower rate if credit remains tight.

WASHINGTON OUTLOOK (Continued)

WASHINGTON BUREAU MAR. 9, 1957

Construction, over-all, shows new signs of growing and this can well offset, in the totals, any further decline in the homebuilding field.

Some highway building plans may be upset. Highway officials here are shocked by cost estimates now coming in from the states under the big new federal-aid roadbuilding program. Some states report that costs have more than doubled over estimates given in 1954 as the basis for the big interstate network that Congress O.K.'d in 1956. There's real doubt now that the \$25-billion program will come anywhere near completing the 40,000 miles of highways anticipated in the program.

Two factors that may push up prices this year:

Transportation costs may go up again around midsummer. The railroads are asking the Interstate Commerce Commission to grant freight rate rises of 17% in the West, 15% in the East, and 10% in the South. Expectation is that they will get at least part of the requested hikes, and that trucks and water carriers will follow along.

Steel wage costs will rise at midyear under terms of last year's union contract. The 1956 raise, about 20ϕ an hour, counting everything, was followed by a price rise of about \$8.50 per ton. The increase slated for July figures out at about 12ϕ an hour. If the industry passes this rise along in higher prices and at the 1956 rate, the price increase would run somewhere around \$5 per ton.

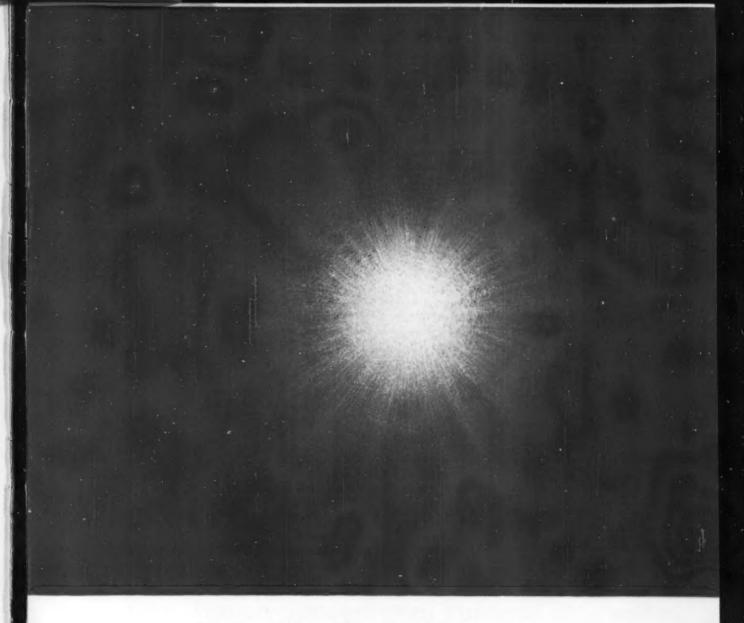
Tax relief for small business: Some GOP backers of Sen. Fulbright's bill to cut taxes on smaller companies (BW—Mar.2'57,p39) are pulling out to push a plan of their own. They are Sens. Barrett of Wyoming, Capehart of Indiana, Potter of Michigan, and Schoeppel of Kansas.

A substitute will be offered by these Republicans. It follows the Fulbright bill, in that it would reverse the present normal and surtax rates on corporations. By reversing the rates and substituting the 22% surtax for the 30% normal tax, all companies would pay less on their first \$25,000 of profits. Proportionately, small companies would benefit most. The departure from the Fulbright formula is that these Republicans wouldn't raise the surtax rate by 1 percentage point to 31% to make up for the revenue lost by the switch.

You may get the showdown this month. Advocates of small business relief will offer their plans to the Senate as amendments to the Administration bill extending the present excise and the corporate income tax rates beyond Apr. 1, when they are now scheduled to drop.

Congress is sweating over the flood of economy mail from back home. It started pouring in on members of both parties after Treasury Secy. Humphrey's famous press conference on the record peacetime budget of \$72-billion.

It's the Republicans who are sweating the most. The Democrats see the complaints about the budget as a possibility for future political hay. Many among the GOP fear the Democrats are right. It's the big reason for the rising criticism of Pres. Eisenhower by Republicans in Congress. They worry that Eisenhower, never "close" to Congress, and now preoccupied with foreign problems, may be misjudging public sentiment about large-scale government spending.



Look at Wheeling Steel this way...

Look for a moment into the whitehot inferno where steel is born. At that roaring, startlingly spectacular moment -its future destiny is being decided.

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Here each heat of steel is produced for an individual purpose—to become a specific final product. Starting at the coal mines and ore mines, Wheeling controls each step in the production of steel...thus producing quality steel...quality products.

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Wheeling Corrugating Company,



for example, has sales offices and warehouses in 15 cities that keep a stock of Building Materials—SofTITE, Cop-R-Loy Sheets, Metal

Lath, Roofing; Galvanized Household Ware and Corrugated Metal Culvert Pipe...all ready for immediate delivery.

You'll find Wheeling Corrugating Company warehouses located in Boston...
Buffalo... Chicago... Columbus...
Detroit... Kansas City... Louisville...
Minneapolis... New Orleans... New York
... Philadelphia... Richmond... St. Louis.
Sales offices are in Atlanta and Houston.

Ackermann Manufacturing Company, provides custom-designed Engineered Stampings through its sales offices in Cincinnati, Detroit and Indianapolis. Wheeling Steel Corporation,



one of the nation's major steel producers—maintains sales offices in 12 cities for the sale of Continuous Weld Pipe...Ductillite Tin and Black Plate

... Hot and Cold Rolled Sheets... Long Terne Sheets... Electrical Sheets... and SOFTITE Galvanized Sheets.

These district sales offices are located in Atlanta . . . Boston . . Buffalo . . . Chicago . . . Cincinnati . . Cleveland . . Detroit . . . Houston . . . New York . . Philadelphia . . . St. Louis and San Francisco.

Thus, each unit is a specialist in its own field—ready to help you with specialized products and knowledge. It is because of progressive, integrated operations like this that Wheeling Steel continues to grow, Bigger? Sure. But more important... better.

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Now...15 servants in everyone's home!

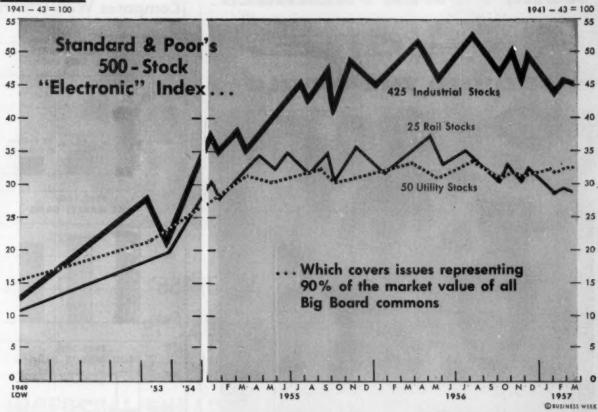
Today's housewife has her own answer to the household help her grandmother often dreamed about. Electricity gives her the "muscle power" of 15 servants.

Detroit Edison has just completed the largest turbo-generator in the world to meet power needs in one of America's fastest growing cities. Its huge rotating parts, whirling at high speeds in roundthe-clock operation, need an unusual oil. In planning operation of this big turbine, Detroit Edison engineers turned to a product of Shell Research—a particularly tough oil with characteristics similar to the product developed for and used in the mighty turbines of the aircraft carrier U.S.S. Forrestal.

Such evidence of Shell leadership in lubricants tells why you can expect more for your money when you buy a product bearing the Shell name and trademark.

Leaders in Industry rely on Shell Industrial Products





Market Measured in a Flash

Datatron electronic computer helps S&P's compile the broadest-based stock index yet seen.

With 500 components, representing 90% of all Big Board values, it's expected to reflect whole market.

 And S&P's has refined other compiling procedures for closer accuracy.

THE CAPSULING of stock market trading data has caught up with the electronic age.

Wall Street analysts and the general herd of market participants this week got their first look at Standard & Poor's newest and most broadly based stock index—an index that is electronically calculated every trading hour to record the collective movements of 500 common stocks, of which 425 are commons, 50 utilities, and 25 rails.

A lot of Streeters think that S&P's statistical brainchild will mute the criticism that has been shrilled for some time at other yardsticks that once enjoyed popular vogue (BW—Jun.21'52,p130). They point out that the components of the new index account for 90% of the total value of the close to 1,100

common stocks listed on the Big Board. It's so comprehensive that a shift of a single point in the index would mean a rise or fall of over \$4-billion in total Big Board common values, which recently stood at \$205-billion.

• Staying Close—The electronic index's biggest service of all will be to supply a figure that will stick relatively close to the actual per share dollar value of the stocks. That's something that market followers, both pro and amateur, have always lacked.

Hitherto, the extreme disparity between index figures and the dollar values has greatly baffled investors and even some pros who should know better. Ostensibly, any index is supposed to be somewhere near dollar value. But at the end of 1956, Big Board commons figured out to an average value of \$49.12 per share, a far cry from the 370.6 index of S&P's 90-stock composite—which is being replaced by the new index—or the 174.9 registered by Dow-Jones 90-commons average.

• The New Tribe—S&P's is using its old method to compute the new group of indexes, which will include daily and weekly over-all figures, as well as individual group data. By this method, the market value of a component stock is multiplied by the number of shares outstanding. This gives the issue's over-all value at the moment, which is then compared with total market value in a base period.

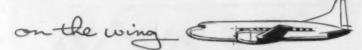
However, S&P's has taken two important steps to ease the discrepancy that has existed between its indexes and the average dollar price of Big Board commons:

• Index totals will be compiled on a base of 10, instead of the old 100.

 A base period of 1941-1943 has been adopted—a time when Big Board commons averaged around \$10 a share replacing the old base years of 1935-1939 for weekly indexes, and 1926 for daily indexes.

These changes start the new index off

ROHR POWER PACKAGES



AROUND THE WORLD



On your flight to Rome by Convair Metropolitan 440 via Alitalia, you see Rohr-built Power Packages when you look out on the wings.

In addition to many of America's leading military planes, Rohr builds the Power Packages* for most leading passenger planes on the world's leading airlines flying folks everywhere safely, speedily by air.

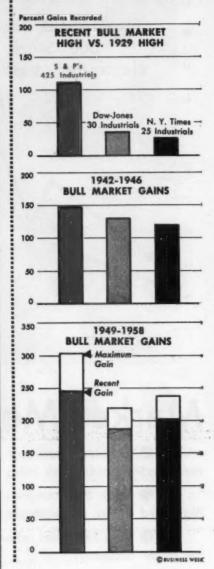
*Rohr starts with a bare engine and builds the engine mount, sheet metal cowling, panels, diaphragms, supporting structures, various air ducts, fuel and oil lines, electrical harness assemblies, and installs other items necessary for the engine's operation, to make a complete "Power Package."

Excellent Career openings new for engineers and skilled technicians

CHULA VISTA, CALIFORNIA

Also plants in Riverside, California · Winder, Georgia · Auburn, Washington

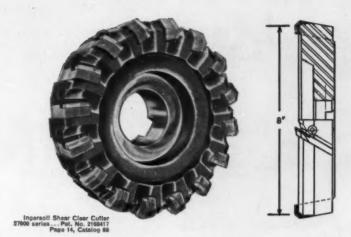
How the New Index Compares With Others



rather close to the actual dollar prices per share. Thus at the 1956 yearend, the new index would have been \$47.40, while listed prices averaged out to \$49.12.

Charles A. Schmutz, president of Standard & Poor's, proudly labels the new index as "the most complete and technically accurate measure of the market ever devised." Streeters hope that he's right, for they have had some queasy moments trying to explain to clients why it is that the popular yard-sticks sometimes move in all directions at once.

 The Need-No one knows for sure how much faith investors have in the various market measures. But Streeters themselves have long agreed on the



Feed rate increased 2½ to 5 times at Vaughn with this INGERSOLL SHEAR CLEAR® CUTTER

The cutter previously used was nullifying the investment in a new standard, knee-type milling machine. The machine had more power than was being utilized. The feed rate was only 12" per minute. The change to Ingersoll Shear Clear permitted the Vaughn Machine Company, Cuyahoga Falls, Ohio, to capitalize on its machine investment and obtain the economy and efficiency of increased feed rate. A feed range of 30" to 60" per minute, when milling rough forgings and steel castings, is now continuously maintained.

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Whether you are concerned with feed rates, longer tool life, finish or cutter costs, the new Ingersoll cutter catalog will be a valuable guide. Write Department 66BW.



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in such washrooms save space, reduce maintenance and janitor work, cut piping connections 80% and water consumption over 70%. With foot-control, no is lost—no water wasted supply is

With foot-control, no time is lost—no water wasted since supply is cut off immediately foot is removed from foot-ring. There are no contaminating faucets to touch—hands, arms and even the torso to the waist, can be washed—each person served fresh clean tempered water from the central sprayhead.

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*BRADLEY WASHFOUNTAINS and SHOWERS are Distributed Through Plumbing Wholesalers.



Write for New Catalog 5601.

need for some sort of quick guide to stock movements; from this need sprang most of the present measures.

The most popular of them—the yardsticks that S&P's is now dropping, plus Dow-Jones and the New York Timeshave based their calculations on pretty much the same stocks, or the same types of stocks. Not long ago, 26 different issues appeared in at least two of these three indexes, and 14 were in all three. Indeed, it's easy to understand that almost all indexes have picked top-grade bellwethers that can be counted on to play a big part in any market move, even a small one.

• Discrepancies—Part of the time, all these indexes would be fairly well agreed on what direction the market was taking, on a week-to-week, or even month-to-month basis. But very frequently, they didn't agree, and over the years these discrepancies would accumulate into really sharp differences (tabulation page 44). Just as an example, S&P's new 425-stock industrial index has been worked back clear to 1926. Just lately, it stood at 110% of its 1929 peak, where the Dow-Jones 30-stock industrial average showed only a 37% gain, and the New York Times 25-industrials were up 27%.

The Street has long been aware of these gaps, but till S&P's latest move nothing specific was ever done about it. A few years ago, there was some muttering among the pros. Finally, at the 1952 convention of the National Assn. of Financial Analysts, a real blast was fired by Harry D. Comer, topflight technician and longtime partner in Wall Street's Paine, Webber, Jackson & Curtis.

The merits and demerits of the different averages derive from their basic construction and the ways in which they seek to adjust to such disturbing factors as stock splits. Comer levels his fire especially at the stock-split adjustments made by Dow-Jones' daily averages and by the newspaper indexes, notably the New York Times and the Herald Tribune.

• Effect of Splits—Comer claims that in the Dow-Jones averages a stock loses some of its influence every time it is split—a factor of growing importance in these split-ful times.

Years ago, Dow-Jones invented a "constant divisor" to compensate for splits. The figure, when divided into the total value of the stocks in the average after one of them had been split, produced the same average that prevailed on the day before the split. But Comer claims that this is "readjustment in reverse." He says that it really amounts to retaining one share of the new stock in the average, selling the other shares that resulted from the split, and then reinvesting the proceeds pro rata among the 30 stocks in the average. Thus, he says, the numerical holding of



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The attorney, always a good man to know, must draw up the contract, and his counsel should be sought. The Trust officer, at left, our Mr. Paul Landon, also has a key role: that of efficiently carrying out the terms and provisions of the agreement. They make up a pair of "seconds" that can be invaluable in your financial corner.

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the split stock is reduced, rather than increased to maintain its proportionate influence in the weighting. In the upshot, unsplit stocks have come to outweigh their more important cousins.

 Maladjusted—Comer takes an equally sour view, though for different reasons, of the Times and Herald Tribune averages. He figured that the Trib's average had become so maladjusted that if all its components fell to zero the average itself would still stand above

Comer has had some kind words for the old S&P's indexes. He seems to feel that they employ the best method for avoiding the pitfalls of stock splits, stock rights, and stock dividends. And the Securities & Exchange Commission apparently shares the approval. The weekly stock indexes now used by SEC were set up by S&P's, and each stock price is weighed exactly as S&P's does in its own calculations.

• The Developers—The new electronic index is compiled with fantastic speed; at any moment, you can press a button and get a composite average almost instantly. Most of the credit for the development goes to a group of young engineers working for Melpar, Inc., of Boston, a subsidiary of Westinghouse Air Brake Co. A couple of years ago they became fascinated by the stock market possibilities of Burroughs Corp.'s Datatron electronic computer. They began experimenting and early last year told S&P's what they had found. S&P's was sufficiently impressed to put up \$50,000 for another year's perfecting of its use on indexes.

In essence, the Melpar group developed a converter that duplicates all transactions on the Big Board ticker onto a special tape which is fed simultaneously into a Datatron computer. The Datatron has been taught to ignore everything on the ticker except the regular transactions in the 500 stocks that make up the index. From the data that it does accept, the computer swiftly derives the basic index data, by multiplying the price by the number of shares outstanding.

 Critical Eye—The computer has been educated to such a point that it even protests at the sight of any ticker tape error that is substantial enough to arouse suspicion. And it has been taught to remember the most recent deal in each stock in the index, so that it can adjust at once to any spurt in trading activity where the ticker tape falls so far behind that digits are dropped to speed matters

Right now, the new index is being carried every hour on the tickers of the American Stock Exchange, Commodity News Service, and the Cotton Ticker; and it appears in various newspapers around the nation, including the New York Times. END

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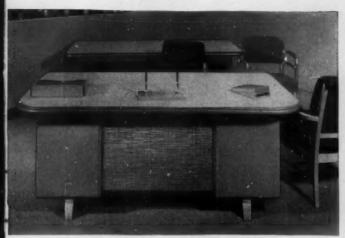




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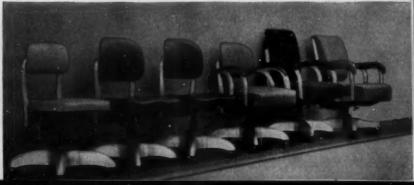
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FIRST-HAND VIEW of Exchange trading floor highlights visit to exhibit, as Girl Guide Mary V. Seip explains what goes on.

Big Board Puts Itself on Display

New York Stock Exchange opens \$1-million exhibit designed to help public understand how it works and why it's needed.

THE YOUNG LADY in the picture at the left may differ from the usual notion of a "Wall Streeter," but she's playing a very important part in a new program to make the activities of the Street and its dominant institution, the New York Stock Exchange, more understandable to the public.

She's one of eight "girl guides" who shepherd visitors through a \$1-million exhibit dramatizing the role of the Exchange—"The Nation's Market Place"—in the U.S. economy (pictures right and below). During their rounds, the visitors get the balcony view over the bustling trading floor of the Exchange, with a lecture by the guide to help them sort out the bewildering rush of activity below.

The display was opened last week on the third floor of a new skyscraper at 20 Broad St., around the corner from the Exchange's Wall Street building. A door connects with the balcony.

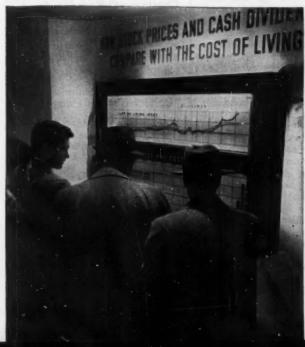
Visitors see among other things an animated board showing how a share of stock is bought and sold, and a color film explaining how to invest out of income. They can even have their names inscribed on ticker tape. Impassively watching these goings-on are four unobtrusive special policemen in plain clothes, ready in case a visitor makes a violent objection to what he sees or hears.



KEYNOTE of varied exhibits in display is role of Stock Exchange in U.S. economy.



LEADING Big Board companies have own exhibits in alcoves around main exhibit.





PROOF for home folks he has "inside" dope-postcard, slipped in slot, will be mailed by Exchange at its expense.

STOCKS as inflation hedge is theme of display showing dividends rise faster than living costs.

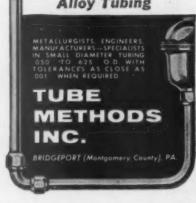
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Double Check

Spending by checkbook is up 100% since the war, as banks put more steam in selling their services.

Americans last year drew more money than ever before from their checking accounts. Checkbook spending rose an estimated \$200-million to a total of about \$3.1-trillion; somewhere around 9-billion to 10-billion single checks passed through the clearinghouses.

That's the word from American Banker, daily trade paper, which based its estimates on projections of the Federal Reserve Board's monthly survey of total check debits in 344 U.S. cities.

To oversimplify a bit, check debits are the sums that banks pay out of checking accounts to honor drafts drawn on those accounts. Actually, the Fed's compilation covers only about 70% of the check transactions handled by the 14,000 banks in the U.S.

Of the 344 cities in the Fed report, 165 last year had check volumes of more than \$1-billion; the year before there were only 156 billion-dollar cities. Not surprisingly, New York had the biggest volume of all, close to \$816-billion. Chicago was second with about \$164-billion, Detroit third with \$75-billion.

 "Velocity"—Total turnover doesn't adequately underscore the gigantic volume of check transactions. Another measure is the "velocity" of checking accounts—the turnover of checking account funds compared with total bank deposits.

In New York, the velocity was about 25 times the 1956 yearend deposit total of around \$32-billion for the commercial banks. Velocity in Chicago was only 15.6 times yearend commercial bank deposits of \$10.5-billion. The difference reflects the fact that in Chicago commercial banks have a larger proportion of savings than they do in New York, where a big chunk of savings goes into mutual savings banks. Also, the securities and commodities exchanges in New York contribute heavily to bank check transactions.

The rocketing of national check clearing figures is due in part to the upsurge in general business activity since World War II.

But banks have helped along, too. Their postwar drive for new business has made a main target of personal checking accounts, along with profitable commercial business.

Some of the personal checking accounts involve "profitable" balances in their own right and are maintained on the same basis as commercial checking accounts. Others, a bit smaller, are Free Money"

MAKE MONEY FOR YOU

The money you have frozen in accounts receivable can't earn a penny for you — normally not for 30 days or longer. Only when your capital is free to go to work at a moment's notice can you take advantage of every profit opportunity as it arises.

Now you can free money normally frozen in accounts receivable—and get the cash you need, as you need it. Through Commercial Factors' "Protected Profit Program" you get cash as you ship, even if you sell on extended terms. In this way, you are never "tight for cash," because all your capital keeps working all the time to increase your turnover and profits. At the same time you are protected against all credit losses and relieved of all collection chores and expenses.

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made "profitable" via fees collected monthly depending on the number of checks written in the period.

• "Specials"-Finally there are the "special" checking accounts. These require no minimum balance, and the bank gets its profit from fees (usually 10¢ a check, plus a fixed monthly charge of around 25¢ or 50¢). Moreover, experience has shown that people who open "special" accounts often provide additional profits for a bank through the use of its other facilitiesby renting a safe deposit box, taking out a loan, opening a savings account.

While checkbook spending has just about doubled in 10 years, total bank deposits have risen only around 40%. This sharper increase in check transactions didn't just happen. In recent years, banks have promoted their services rather heavily, with special emphasis on checking accounts. Banks devote 15% to 20% of their advertising budgets to checking accounts, according to the Financial Public Relations Assn., of Chicago. And bank advertising budgets have risen from \$20million in 1946 to an estimated \$100million this year, the American Bankers Assn. reports.

There's one "banking" institution that is chagrined by the growing use of checkbooks: The U.S. Post Office Dept. has watched its postal money orders losing out to bank checks in popularity; while bank check spending has been doubling since the war, postal money order transactions have declined around 19.1%. There's talk in Washington of discontinuing the service entirely.

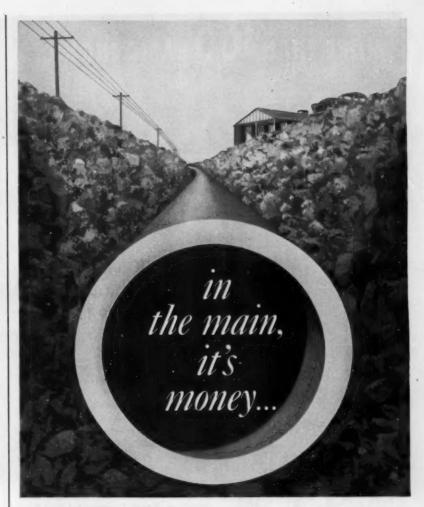
More Long-Term Money Expected for Lending

One group of Wall Streeters believes supply of long-term funds for borrowing will increase this year. Girard L. Spencer, partner of Salomon Bros. & Hutzler, says borrowers should encounter less difficulty in meeting their needs in 1957 than they had in the two previous years.

Spencer agrees there will still be a deficiency in the supply of new longterm capital this year, but he thinks the shortage will be somewhat less than before. He figures the supply of longterm investible funds at around \$22.1 billion. With demand at about \$23.2billion, this would leave a spread of

\$1.1-billion, or 4.7%.

It is anticipated, says Spencer, that the Treasury may include long-term bonds in its fiscal program for the year. This would temporarily affect the market for long-term corporate and taxexempt securities, as well as the market for outstanding Treasury issues. In addition, he says, a portion of the pub-



your tax money!

Substantial savings can be effected for your community and for you, when K&M Asbestos-Cement Pipe is used.

THE INITIAL COST IS LOWER! K&M Pipe is relatively light in weight and as a result, is easier to handle, transport and lay.

LONG, ECONOMICAL SERVICE LIFE! K&M Asbestos-Cement Pipe cannot corrode . . . there is no internal clogging from rust or weakening of the walls. Its bore remains smooth; flow of water and pumping characteristics remain unchanged and taxes are not thereby increased.

THE NEW "FLUID-TITE" COUPLING for joining the pipe is a major step forward for the water works industry. Fast installation can be made under any weather conditions. With water pressure in the mains, the self-energizing sealing rings are expanded automatically forming an even tighter seal.

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lic and private long-term financing that was postponed last year may be offered this year, thereby adding to the demand for long-term capital.

However, he adds, if current high interest rates continue, redemption of U.S. savings bonds could lead to a sizable increase in the supply of funds for investment in non-government securities.

FINANCE BRIEFS

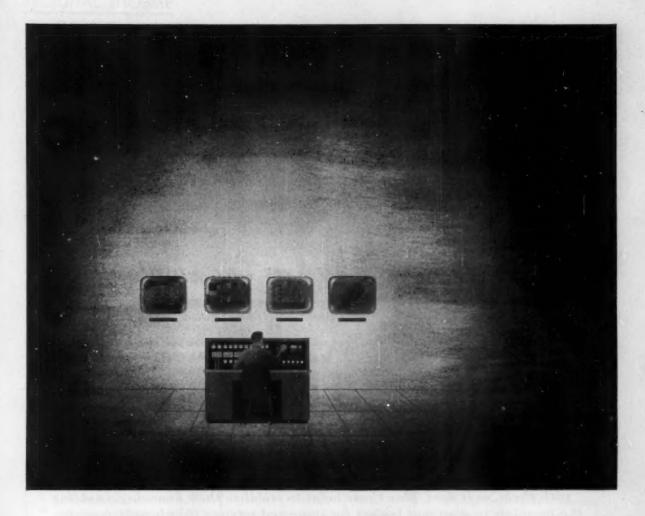
Sale and leaseback deals have their perils for companies seeking to finance expansion or to boost working capital (BW-Feb.23'57,p128), says Chmn. Rawson G. Lizars, of Certain-teed Products Corp. Lizars says rental payments on plants are actually fixed obligations that could hurt if profits shrank. And the touted tax savings appear only if the rent can be deducted from profits.

Mutual savings bank deposits in January rose to a record \$30.1-billion, but the \$85-million gain was way below the year-before climb of \$140-million, reflecting the fierce fight for savings among different types of institutions (BW-Mar.2'57,p92). The gain this January breaks down to \$63-million in regular deposits, the rest in club and special purpose accounts, says the National Assn. of Mutual Savings Banks.

Tax borrowing had better get cracking, if it's going to swell bank loans. For the week ended Feb. 27, New York City banks reported a \$35-million drop in business loans, compared with a \$120-million gain in the year-before week. Since the start of the year, business loans have shrunk \$350-million; in the same period of 1956, shrinkage was only \$77-million.

Paper and paperboard portents: Industrywide production in the week ended Feb. 23 was 15.5% below the 1956 week, with new orders of 1.1% and unfilled orders down 25.8%. David L. Luke, Jr., president of West Virginia Pulp & Paper Co., blames the lull on inventory cuts by customers, not on boosted capacity (BW-Feb.2'57,p58). In a report to stockholders, he said, "This kind of reduction in demand is usually temporary and is currently accentuated by the tight money situation."

General Dynamics Corp. will increase its authorized common from 15-million shares to 30-million, if stockholders on Apr. 25 approve a board recommendation. John Jay Hopkins, chairman and president, said the move would make stock available to finance acquisitions, and would make possible a wider distribution of shares.



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"The way <u>BUUE CROSS</u>

works directly with

hospitals helps

our community as well

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"We believe that what our company does to help employees should also, whenever possible, benefit the entire community. Blue Cross meets this objective splendidly because of its unique relationship with local hospitals. Working directly with them, as it does, Blue Cross helps to stabilize their financing, enabling the hospitals to plan and budget for improved services that benefit everyone."

Blue Cross Plans, serving locally coast to coast, bring Americans this famed program for prepayment of hospital care... the only one officially approved by the American Hospital Association.

TODAY more than 300,000 companies of all types and sizes have Blue Cross...some of them for more than twenty years! Here is dramatic proof of how well Blue Cross protection meets needs of management and employees.

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Flexible to meet management goals.
Blue Cross protection is adaptable to meet the requirements of large and small companies. It can be easily integrated into all types of employee "benefit" packages.

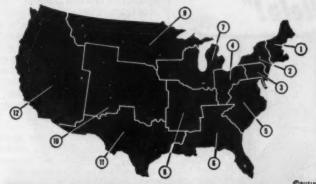
For more information on how Blue Cross can serve your company, contact your local Blue Cross Plan. Or write Blue Cross Commission, Dept. 615, 425 North Michigan, Chicago 11, Illinois. Some of the 300,000 companies whose employees enjoy Blue Cross protection . . .

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The Income Pattern: Business Week's Regional Income Indexes

U.S. Incomes: Up 4.8% From Last Year



COUSINESS WEEK

Federal Reserve District	% Change	The Indexes		
	vs. year ago	Dec • 1956	Nov. 1956	Dec. 1955
1. Boston	+2.7%	285.2	286.8	277.8
2. New York	+4.8%	303.3	304.2	289.5
3. Philadelphia	+4.6%	298.6	298.3	285.5
4. Cleveland	+3.3%	346.4	350.7	335.3
5. Richmond	+3.8%	363.0	363.2	349.7
6. Atlanta	+4.9%	440.5	440.6	419.8
7. Chicago	+4.6%	356.0	353.5	340.4
8. St. Louis	+3.1%	324.0	325.7	314.4
9. Minneapolis	+8.0%	353.2	344.4	327.1
10. Kansas City	+2.7%	402.2	400.0	391.5
11. Dallas	+6.8%	489.4	478.4	458.1
12. San Francisco	+7.9%	394.3	398.9	365.5
Nation	+4.8%	351.9	351.9	335.8

1941 = 100; adjusted for seasonal. December figures preliminary; November revised.

Less Steam Behind Climb

U.S. incomes in December, 1956, were 4.8% above December, 1955, according to Business Week's Composite of Regional Income Indexes. This was the smallest year-to-year gain in 20 months. Incomes in four regions—Philadelphia, Chicago, Minneapolis, and Dallas—set themselves new records. The largest increase was in Minneapolis, where income was up 8%. San Francisco and Dallas followed—up 7.9% and 6.8% respectively. Boston and Kansas City scored the smallest gain.

The nation's income for December showed no change from the record November level. Incomes dropped in seven regions, but the declines were mostly small. Of the five regions with higher incomes, Minneapolis chalked up the greatest gain—2.6%. Two things accounted for this fairly substantial

month-to-month gain. First, the 1956 iron ore shipping season on the Great Lakes was the longest in history. It continued well into December as shippers moved as much ore as possible before the freeze-up, to counteract losses suffered during the July-August strike. This delayed the usual decline in transportation employment. Second, there was a pickup in agricultural machinery production. Workers laid off in September and October were called back in December.

The Dallas region also rolled up a large month-to-month gain—the largest, in fact, since December, 1955. Incomes there were up 2.3% from November to December.

The 1956 U.S. average was up 6.1% over 1955. Regions 4 and 12 led with 8.2% gain; Region 10 trailed with 2.1%.



CARL S. SWISHER, President

"With <u>BLUE</u> SHIELD our people get liberal benefits for a wide range of surgical-medical services!"

"It's important to us that Blue Shield lets our employees benefit from the great progress medical science is making-particularly in the field of surgery. They can afford the best care, without financial hardship. Blue Shield membership is 100% at King Edward."

Quick facts on Blue Shield:

Sponsored by doctors in their own local areas . . . Blue Shield Plans help people meet surgical-medical and maternity expenses.

Broad protection. Provides benefits for hundreds of operations and for many nonsurgical services.

Low in cost. Blue Shield Plans work on a nonprofit basis.

Easily adapted to welfare programs in large or small companies. For full facts, contact your local Blue Shield Plan, or write Blue Shield Commission, Dept. 615, 425 North Michigan, Chicago 11, Illinois.



Service marks reg. by Blue Shield Medical Care Plans

"We've Got a Problem that's a Lot Bigger than these Presses -Brother, *We Need Help!*"



• Gigantic presses are used by a leading manufacturer in forming automobile body parts. They are operated by 200-500 HP direct-drive motors. Constant starting and stopping of these motors with each stroke of the presses, put a terrific burden on the motor starter contactors...more than even the best, heavy-duty contactors could handle. The result—frequent and very costly maintenance and replacement.

Square D Field Engineer, ED BECK, went into a series of huddles with the company's production engineers—then worked with Square D's design engineers in solving this really snaggy problem. The answer—Square D developed electronic control which completely eliminated the maintenance problem.

This electronic control was installed in September, 1955. As this story is being written, there has been no maintenance—no replacement of parts—not a single minute of down-time!

At your service—in 3 important ways

Field Engineers are available through Square D branch offices in all principal United States cities—and in Canada, Mexico and England. Backing up these engineers are the design and manufacturing facilities of 14 strategically located Square D factories and the localized services of a nation-wide network of authorized electrical distributors.



Ed Beck

NOW...EGAM PRODUCTS ARE A PART OF THE SQUARE D LINE

NEWS OF THE MONTH FROM SQUARE D

INVENTION BY PREDICAMENT... Modern control systems for automatic machinery are beginning to involve so many electrical components that there's no longer enough space to properly mount them. Square D has solved the problem by designing a new series of control relays, timers and terminal blocks requiring only a fraction of the space of other designs.

SAY IT WITH MUSIC...A new approach in developing interest among engineering students—we're sending them a Square D recording, "The Human Touch." It gives a few company highlights and then musically explains the company's philosophy of placing high values on human qualities.

MOUNTAIN TO MOHAMMED...A lot of heavy industry electrical control is so large that it is seldom seen until it is actually installed. A display coach carrying such products recently introduced by the Electric Controller & Mfg. Co., a division of Square D, has just toured the northern and eastern states and is now headed for the south and southwest. Thus, the equipment is brought to industrial customers' doorsteps.

2870 DIPLOMAS!...Two years ago, Square D started a training program through which its distributors' salesmen are offered short courses in electrical fundamentals and application of electrical distribution and control equipment. These courses are conducted at the distributor's place of business by Square D Field Engineers. To date, 2870 salesmen have earned "specialist" diplomas.

Atlanta assembly plant is nearing completion. By May 1, the new 33,000 square foot facility will be serving the entire southeast—building all types of special electrical distribution and control equipment and functioning as a redistribution point for the standard products of other plants.



SQUARE D COMPANY

MANAGEMENT



"Snodgrass, I just wanted to let you know bow you stand on our team."

Executive Coaching Catches On

Many companies are turning to tete-a-tetes between a manager and his assistant to let subordinate know where he stands in company and discuss how he can become more effective in his job.

In offices all over the U.S. today, a manager and the man immediately under him self-consciously face each other in a soul-searching discussion of the subordinate's performance. For many of these men, it will be the most awkward situation of the whole year. Yet the practice is spreading as more top management men see it as a help in coaching junior executives.

• Wide Interest—American Management Assn. reports that applicants come in through the windows whenever it announces a seminar on appraisal reviews. And management consultants, a sure barometer of management interests, are jumping into the field. Dozens of companies already are subjecting their executives to these personal evaluation sessions. Among some of the big ones now doing it are Monsanto Chemical Co., Boeing Airplane Co., Atlantic Refining Co., Procter & Gamble Co., General Foods Corp., Food Machinery & Chemical Corp., General

Mills, Inc. Hundreds of others are getting set to give executive coaching a try.

• What It Is—In theory, the appraisal review works this way. The boss closets himself with his subordinate and there ensues a comprehensive give-and-take discussion of the subordinate's performance on the job, relations with fellow workers, standing with his superiors, all his strengths and weaknesses. The wind-up is a heart-to-heart talk on how the junior manager can improve himself. Most frequently, before this interview takes place, the boss talks with his own superior or a committee of higher executives to make the initial appraisal.

Many companies are now turning to the appraisal review because it gives the boss a chance to tell his next-in-line just where he stands and possibly where he is going. It also provides a means for "improving" a man, mold him to fit in with the company team. Some companies, however, will have nothing to do with appraisal reviews at all on the grounds that "the personnel function is already much too formalized"

· Conventional Method-A large number of companies, of course, already do have superiors fill out written appraisals or merit forms on the people who work under them. These reports make their way up the line to higher executives and then into the files. The difficulty with this system: The people being judged wonder and worry about the results. One member of a large consumer goods company voiced a popular complaint when he confided: "They never fire anybody. They never tell you how you are doing. You don't know, so pretty soon you get awfully restless."

Some companies are beginning to realize the limitations of this appraisal. They're asking themselves what good does it do a man—or the company—if you never tell him what he's doing wrong or how he could do better.

The personal appraisal review, part and parcel of post WW II corporate enthusiasm for "management developIndependent research laboratory tests of name-brand glass-lined water heaters show...

Permaglas' best protection against rust-thru



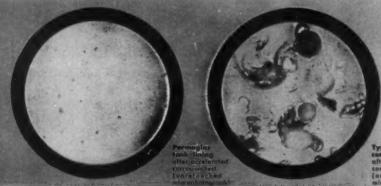
You enjoy this . . .

Hot water — crystal-clear and rustfree — constant joy to home-folks who own Permaglas water heaters. And A. O. Smith's skill with glassprotected steel is now available to industry . . . to solve today's and tomorrow's product problems.

because we do this!

More than 3000 glass formulas have been developed and tested by A. O. Smith in a continuing program that began in 1928. All for the sake of protecting the world's most useful metal—steel—extending its life and performance abilities.





Accelerated corresion tests prove A. O. Smith produces the most corresion-resistant of all glass linings found in water heater brands avoilable today. Permagles lleft shows virtual absence of etching... no tank metal exposed. In these tests—conducted and certified by an independent research laboratory—other glass-lined units, of comparable size and price, were subjected to identical torture. Microphotograph at right shows typical result—glass severely eroded... tank metal exposed to rust,

Typical competitive lining after accelerated corrosion test (unrefouched

The world's largest manufacturer of glass-protected steel products proves there's a big difference in glass-lined water heaters

SINCE A. O. Smith introduced *Permaglas* water heaters, more than 3,500,000 have proved their corrosion-resistant superiority in homes the country over.

And that's just part of the story. Protecting steel with glass, you see, is an A. O. Smith specialty. No other manufacturer has contributed so much to the research and development of glass linings that guard steel from corrosive attack in products for home, farm and industry.

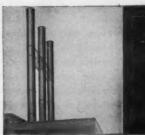
No residential glass-lined water heater brand on the market today can excel the rust resistance of the glass protection exclusively formulated and used by A. O. Smith. This statement is backed by accelerated corrosion tests validated by the independent research laboratory referred to above.

For more facts about A. O. Smith products of glass-protected steel — write for free, illustrated booklet.



MILWAUKEE 1, WISCONSIN

11 plants in New York, New Jersey, Pennsylvania, Ohio, Wisconsin, Illinois, Texas and California International Division: Milwaukee 1, Wisconsin



PERMAGLAS smokestacks... answer industry's need for longer smokestack life . . . economically.



GLASCOTE (Subsidiary) products for severest chemical processing. Defeat corrosion, contamination.



PERMAGLAS home heating and cooling...ceramiccoated heat exchangers prevent corrosion.



HARVESTORES for farm feed processing.
Permaglas mechanized bulk storage for industry.

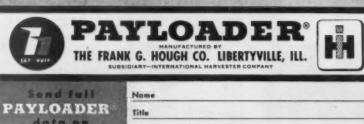


PERMAGLAS beer storage tanks . . . guard product-flavor, purity and uniformity.



This single "PAYLOADER" is doing the job which formerly required two towing tractors — and two operators . . . and doing it better, at only a fraction of the cost. It shifts kiln cars of unfired brick around the air-dry room and feeds them to the kilns . . . handles trains of 4 to 6 loaded cars (up. to 42,000 lb.). Its Torque-converter drive gives smooth, even starts and a steady push that reduces damage to the bricks.

Regular equipment for the business end of this model HA "PAYLOADER" tractor-shovel is an 18 cu. ft. bucket — not a lift-fork attachment — and it can dig more, carry more and deliver more tons of bulk material than heavier tractor-shovels with larger engines. Tine-forks, Sweeper and other attachments are also availuable for this unusual tractor-shovel to further increase its usefulness. Larger "PAYLOADER" models up to 2½ cu. yd. payload capacity are available for every need indoors or outdoors — made by the pioneer and leader in tractor-shovel manufacture. There's a nearby Distributor ready to give you full information. The Frank G. Hough Co., 700 Sunnyside Ave., Libertyville, III.



P	AYLOADER®
	Four-wheel-drive sizes 1 to 21 cu. yd.
	Rear-wheel-drive
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Title			
Company			
Street			
City	4		
State			
58		BW	

"... engineers, hard to get and hard to hold, get special, gentle treatment ..."

EXECUTIVE COACHING starts on p. 61

ment," is designed to close this gap. It provides for intimate coaching to help a man develop the way the company wants him to and can be used as a tool for motivating (or pressuring) him to improve.

 Varying Practices—Not all companies handle the appraisal review in the same way. One, for instance, uses the technique but gives reviews only to employees who ask for them. Some companies require appraisal reviews for executives but admit their engineers, who are hard to get and hard to hold in today's tight market get special, gentle treatment. This special policy for engineers is explained by one company this way: "Dutch uncle talks don't work when they can thumb their noses at vou." However, other employees, less precious in the market sense, still get the full treatment.

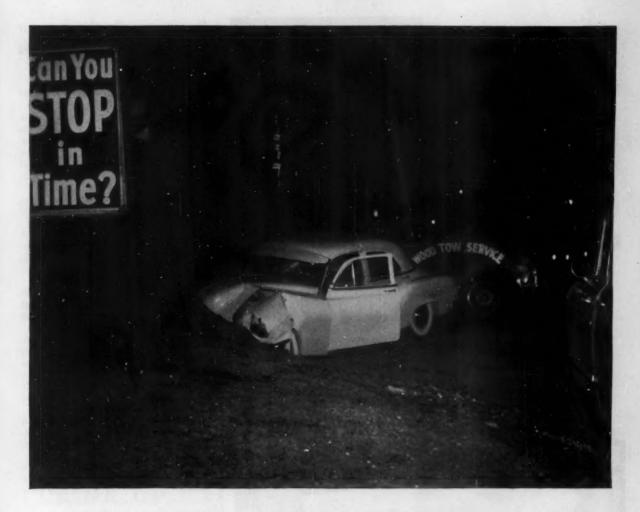
Still another company asks that its senior executives analyze themselves (by filling out an appraisal form) before casting a critical eye on subordinates. But, according to the subordinates, this is rarely done.

In a few concerns, the junior executive not only sees the appraisal but may help write it. In others, he never sees the final written report. "It would be too brutal," say these companies. (The Navy, which continually appraises its officers, follows the practice of showing an officer the report only when it is

• Management Questions—Just how well do face-to-face appraisal programs work out in practice: Is there any resistance on the part of the people who are expected to participate? Do the parties really let their hair down and freely express their thoughts during the interviews, is there a true give-and-take exchange? Do the subordinate employees actually improve or develop? Are the programs worth the thousands of dollars that companies are sinking into them? These are the questions a lot of management people are asking themselves.

• General Findings—BUSINESS WEEK reporters visited consultants, top executives, and middle management men across the country to get a glimmer of some of the answers. They found different systems among the companies they called on, got different reactions at various levels of management within the companies. In general, this is the picture:

• The appraisal review is pretty



CHEAP BRAKE LINING CAN BE EXPENSIVE!

In case you are not aware of it, it may save your life to know that there is both quality and cheap brake lining on the replacement market, and the purpose of this message is to warn you against the latter when you get your brakes relined.

Cheap lining is dangerous because it can't resist heat—the number one enemy of brake lining. Heat generated by braking friction is intense. It can easily reach 800 to 900 degrees Fahren-

heit—close to the red heat of iron. It is this heat that causes cheap brake lining to "fade" to the point where the driver may push the brake pedal to the floor and still have no stopping power.

As proof of its quality, Bendix brake lining is used on more new automotive vehicles than any other type. Known by the brand name "Bendix Eclipse" it is made by our Marshall-Eclipse Division, Troy, New York. This division keeps a fleet of thirty cars and trucks running virtually around the clock testing brake lining and blocks under every conceivable operating condition. It does more field and laboratory testing than any other manufacturer we know of.

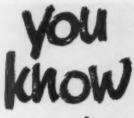
So, a word of warning when you get brakes relined: Demand quality lining. It stops better, wears longer. Stay away from the cut-rate places. Know your servicemen. Know your lining. If it is Bendix Eclipse, it's top quality.

*REG. U.S. PAT. 0FT

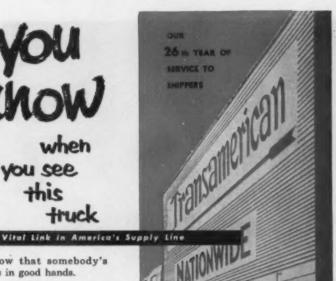
A thousand products



a million ideas



you see



You know that somebody's freight is in good hands.

You know that it will be delivered on schedule.

You know that the shipper is a man of superior judgment.

Transamerica

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Addressing cartons with a stencil that can be typed or handwritten

Shipments go out faster, without errors with modern Weber Marking Systems

Old-fashioned stenciling and labeling systems can seriously delay shipments and waste time and labor. The real key to a smooth rolling shipping operation is a fast, low-cost system for addressing the shipments.

A Weber system - tailored to your particu-

lar order-processing and material handling procedure - will get your shipments addressed faster, with less help and fewer errors. Whether you use labels, tags or stencil direct-to-carton, you'll find a system just right for your operation.

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CREATORS OF SYSTEMS AND EQUIPMENT FOR MULTIPLE ADDRESSING AND MARKING

" . . . usually the superior does the giving and his assistant the taking . . ."

EXECUTIVE COACHING starts on p. 61

largely a middle management affair The senior executives who sanction the procedure, rarely prescribe it for them-selves. Most are willing, even anxious, to get reports and establish rapport with the men below them. Middle management men voice some doubts about the system, have some strong complaints about it, but also some kind words.

· Really open, two-way talks seldom occur. Usually the superior does the giving and his assistant the taking, with few letting their hair all the way down.

· Most executives seem to doubt that tete-a-tete appraisals effect any deep changes in their juniors, or in themselves.

· Appraisal interviews are extremely hard to conduct-especially when they get away from job performance and move into attitudes or personal habits. And when handled ineptly by the senior manager, they can cause some flare-ups.

· The Interview-What goes on in an appraisal interview varies with the company, the men, and the jobs involved, but there is a discernible pattern.

Normally, the interview starts with a review of the subordinate's strong points. "They can't keep a chip on their shoulders while they're taking a bow," explains one personnel man.

Then the senior executive gradually moves into areas where the assistant could stand improvement. "Let the subordinate do all the talking. He'll tell you what's wrong with himself, and all you have to do is agree," says one manager.

From this point, in some companies, the interview progresses to a man's attitudes or even to his personal habits. He may be told, "This is why you don't get along with fellow workers," or "You're not trying very hard." The senior executive may expound his concept of what top management expects in the way of employee decorum. The subordinate may get gentle hints to put away his loud ties, to drop certain of his luncheon companions.

Before the interview is concluded, the two men are supposed to have agreed on what areas of performance are poor and how they will be worked on. At the next appraisal, or perhaps sooner, they will meet again to see how the improvement program is coming

The process is a gentle form of whip, combined with a friendly arm



A heavy build-up of scale, like that shown in the illustration, will gradually reduce the effective diameter of feed line piping, and will result in seriously restricted carrying capacity.

The line must be shut down for maintenance or replacement, causing expensive down time in the plant. Proper water conditioning will prevent this unnecessary loss. This is but one of the many problems presented by the corrosive elements of water.

In Dearborn's complete line of water conditioning products, there are treatments to eliminate scaling, sludge, carry-over, return line corrosion and other similar difficulties. Dearborn combines the proper treatment with the right control methods under technical supervision. The re-

sult: less down time and greater operating efficiency.

Dearborn Supervisory Service provides you with the three elements necessary to maintain the best in a water conditioning program—positive control, top performance effectiveness and maximum economy.

Mail the coupon for complete information.

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It couldn't be done...

so Great Lakes Screw Corp. did it...

with KEYSTONE XL Heading Wire







"We want a door hinge bolt that won't break off in a collision—that we can drive faster—that's cheaper, yet higher in quality," said the automotive engineers. "Can do," replied Great Lakes Screw Corporation, Chicago, Illinois, well-known fastener manufacturer.

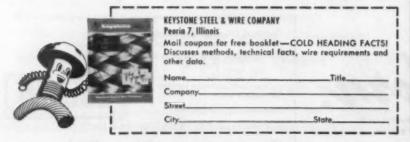
They cold headed the bolt blank shown above, in two blows—without machining or heat treating. Cold heading this bolt requires an exceptional flow of materials in both blows—the first blow cones the head, the second drives in the recess and mushrooms the head to specification.

Tough assignment? Not with Keystone "XL" Heading Wire! Because of "XL's" consistent flowability and unvarying uniformity, Great Lakes makes long runs of these cold headed parts, producing them on schedule with minimum of rejects.

If you, like Great Lakes Screw Corporation, manufacture complicated parts or fasteners, it will pay you to call your Keystone representative. Tell him how we can serve you.

Keystone Steel & Wire Company, Peoria 7, Illinois

KEYSTONE WIRE FOR INDUSTRY



"... the process is a gentle form of whip, combined with a friendly arm around the shoulder..."

EXECUTIVE COACHING starts on p. 61

around the shoulder," thinks one executive.

But applying the technique raises some special problems.

· Communication Problem-One major difficulty arises because virtually no business organization operates on the basis of a full and frank exchange of views and information that lies at the heart of the appraisal review system. Instead, the executive system in a company is made up of power groups and alliances through which executive spon-sors and their proteges operate. They trade information, news and views, as coin of the realm. Chiefs often hold back information from their fellows or subordinates, or release it selectively. And sometimes subordinates gang up on their bosses to protect or advance themselves.

"I never forget it is my boss I'm talking to," says one junior, and his superior is not forgetting either.

 Prestige Factor—There are other factors restricting the free exchange of information at the interviews. How do you tell a man, for instance, that he's reached the end of the line. He may already know it, but still would not like to be told outright.

If he doesn't know it, it may be even harder to tell him. A vice-president wonders: "What do I say when a hardworking aide asks how he is doing. I can't very well tell him he is doing a good job but just isn't smart enough to go up another slot." This executive feels to tell his subordinate would crush him, but that simply to tell him he is doing a good job would lead him to expect a promotion or raise. Rather than meet this problem headon at a forthcoming review, the executives would like to work it out gradually.

In addition, few managers pretend to have much psychological or human relations skill. Either you've got it or you haven't, thinks one. Most will draw the line when it comes to delving into a man's attitudes in order to "improve" him. If a man doesn't get along well with superiors or with fellow workers, or if he has trouble at home, he knows it, say superiors. And many honestly doubt that their talking about it will do much to change a man's attitudes—no matter how much the personnel specialists may prompt them.

• Question of Authority—One manager

 Question of Authority—One manager interviewed by Business week brought up another problem. "What comes of

Euclid TWIN-POWER cuts earthmoving costs

Developed and pioneered by Euclid, the Twin-Power principle utilized in the Model TC-12 Crawler Tractor, "Euc" Scrapers and Rear-Dump haulers makes them top performers on a wide range of work. With two engines, each having a separate Torqmatic Drive, these units carry bigger loads and provide more workability than other equipment.

It's advanced engineering like this that has made Euclid a leader in the heavy construction equipment field. There are types and sizes of Euclids to meet every requirement of mine, quarry, construction and many kinds of industrial work.

If any of your operations utilize earthmoving equipment—scrapers, crawler tractors, rear-dump or bottom-dump haulers for off-highway service—we'd like to show you how Euclids can cut your costs and why Euclids are your best investment.





... customers like them

High selling power and ease in use are typical of the lithographed metal containers produced by J. L. Clark . . containers that inspire repeat business. Here, complete service is available to you-engineering for structural design, the Impulse Design Studio for creative artwork.



Lithographed Metal Containers J. L. CLARK



"...it is somewhat like calling in your wife for a performance report . . ."

EXECUTIVE COACHING storts on p. 61

these reviews?" he asks. "If I tell a man he is doing well but can't give him a raise, does that make him feel better or worse? If I tell a man he is doing poorly but can't fire him, then what?' Most managers are in the same position. They can make recommendations, but the actual power of giving out raises, firing a person, even directing his work often rests two or three levels higher. Actually, many companies deliberately schedule the appraisal sessions far apart from the salary review period, so employees won't expect raises after a favorable review.

In some respects an appraisal review is like calling in your wife, telling her you've had an eye on her performance for the past year, are generally pleased, but would like to make a few suggestions for improvement. Everyone admits the situation could be handled better on a day-to-day basis.

· The Advantages-But most executives seem to agree that the appraisal review draws attention to the job and brings it into sharper focus. They also cite these other reasons in favor of the system.

· It forces them to analyze their men-and this must be done in a fairly objective manner, since they must justify their appraisals to the men personally.

· It brings into the open problems that might otherwise be overlooked. At one interview, a subordinate blurted out that his work was being ignored. This turned out to be true-but it isn't

· It can prevent a good man from getting lost in the shuffle. One interviewee, given a low rating in initiative by his chief two years ago, complained at that time that he never got a chance to show any. Taken at his word, he was tossed some tough assignments, did well, and recently moved up a rung when his boss got promoted.

· "It reassures the nervous Nellys you find in every department, and if you get along well with your men it gives them a chance for a quiet hour in which to get things off their chests or have that chat you've all been too busy for," says one executive.

· Interviewees' Reaction-Interviewees generally find the appraisal interviews uncomfortable, but say they do like the idea of knowing where they stand with the boss and what's going on record.

How effective an interview is depends largely on the interviewers. "If your boss is relaxed, and confident about







How **REYNOLDS** packs new savings into wire cloth shipments

Palletized packaging for wire cloth, successfully developed by the Reynolds Wire Division of National-Standard, is now saving customers plenty of time and dollars.

Note in the photographs how rolls of slit and full width material are both mounted on nonreturnable pallets. Advantages and savings accrue all along the way.

For example, there's far less chance of damage

in shipment. And think how much faster, easier, these unit loads can be handled on arrival . . . in and out of storage . . . and right to production operations.

So chalk up another extra for Reynolds' service ... and find out what this new packaging method can mean to you! Find out, too, what Reynolds means by quality control and uniformity in wire cloth manufacture. It pays.

NATIONAL



STANDARD



". . , the committee approach seems to be the system coming to the fore . . ."

EXECUTIVE COACHING starts on p. 61

his own position, you usually get a pretty good interview," says one Pittsburgh veteran. Quite a few men think that going through an interview themselves with their own chiefs, helps them give a better one in turn.

· Picking Up Tips-Recent college graduates take to reviews quite easily. They are accustomed to being told how they stand and are eager for any tips on how to adjust, says a personnel man. The same, he says, holds true for the "hot shots," rising young men pretty sure they are doing a good job but anxious for any extra tips they can pick up on how to please the top brass.

Those apt to dread the reviews are usually men who know they are doing poorly.

Most men seem to look on reviews as handy reference guides for external behavior on the job. They only balk when the reviews become too much of a pressure session or degenerate into a layman's form of psychology.

· Injured Feelings-One engineer, affronted at his superiors' comments on his private life, left for another job. They "eliminated a man who didn't fit the pattern, but they also lost one of their most creative designers," says a

A soap company salesman, quietly advised that his work was good but that company brass frowned on his driving a sports car, left for another job. So did a manager whose superior started analyzing his ego.

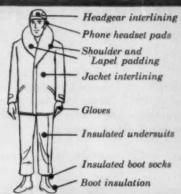
· Committee Approach-Appraisal review systems vary from company to company. But as management becomes more familiar and experienced with the method in general, one particular system seems to be coming to the fore. That's the committee approach.

Under this setup, a committee of seniors, including a man's immediate supervisor, hold an appraising session. Then, the supervisor closets himself with his assistant and presents the group findings and suggestions. From there, the two men discuss in what ways improvements can be made.

This system offers several advantages. Since the appraisal committee usually represents an important segment of hierarchial authority, its pronouncements generally carry a good deal of weight. The committee approach also eliminates any tendencies for personal prejudice. And it takes a great load off the supervisor. Instead of saying "I think . . . ," he can say, "We believe. . . ." END

from head to foot...

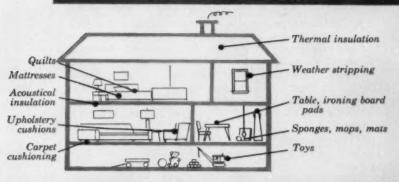
urethane



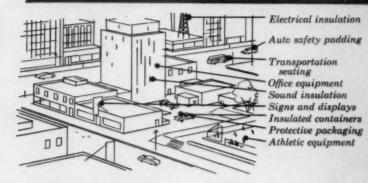
... attic to cellar

foam

is here



and all around the town

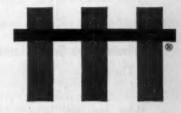


Wherever you go, whatever you do, chances are you'll meet urethane foams somewhere along the way. In the space of just a year or two, these versatile materials have moved fast and travelled far from the chemical laboratories which gave them birth.

For example, one out of every three new autos will have urethane foam safety padding this year; you'll find it in the cushions of latest furniture designs, as lightweight interlining in stylish outerwear, under softly-cushioned rugs and carpets, around windows and between walls, as it moves into new markets and across the land.

Urethane foams are chemistry's latest gift to the future. If you manufacture or use anything which employs cushioning, padding or insulation in its design, you'll want the full story on these soft, tough, lightweight, "workhorse" materials called urethane foams. For sources of supply and further information write Mobay Chemical Company, Dept. BW-11, St. Louis 4, Mo.

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MOBAY
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In Management

March rolled in this year to the tune of war cries from a dozen companies engaged in battles for control. Some are new rounds in continuing quarrels—but a whole new crop is rising out of internal disagreements.

Board Splits at Metal & Thermit

At Metal & Thermit Co., a proxy fight has started over a division within the board. At the Feb. 25 board meeting, Pres. H. E. Martin proposed a slate of 12 names for the board, which dropped two of the present members. The board split 6-6, and the slate lost.

So Martin and executives of American Can Co.-which owns more than 20% of M&T's outstanding common and supplies it with the bulk of its scrap tin-formed a stockholders committee. This committee is soliciting proxies for its slate, which now numbers 10 and includes the six board members who voted for the original slate.

Almost immediately, another stockholders' committee was formed by directors Lester and Alexander Rogers, whose family also owns more than 20% of M&T stock. This committee will solicit proxies for a slate that will include five of the directors who voted against the Martin slate. (The 12th director, Chmn. F. J. O'Brien, had previously announced plans to retire.) The annual meeting is scheduled for Apr. 11. The Rogers' interests see the fight as an attempt by Canco to take control of M&T.

Stockholders Join Fight at Glen Alden

Stockholders at Glen Alden Corp. are split over the fight arising out of a board divided over the proposed acquisition of Maremont Automotive Products, Inc. (BW -Feb.23'57,p173). In addition to the committee supporting Pres. Francis O. Case and Chmn. Gilbert S. McClintock in their opposition to the terms of the acquisition, "retired investor" Charles B. H. Deller has formed a committee to endorse the move. The committee claims to represent "several hundred thousand shares."

A third stockholder group has brought a suit to postpone the special Mar. 12 stockholders meeting to decide the Maremont issue. Management is scheduled to show cause on Mar. 7 why the meeting shouldn't be set back.

Case has proposed a 25¢ dividend for Glen Alden, says he will have three other board members voting with him on it. But the four-member majority supporting the acquisition has called the dividend suggestion a "false hope."

Who's Who Battle Lands in Court

The fights aren't all internal. It was an outsider wanting to take over that precipitated the battle between Wheeler Sammons, Jr., president of Marquis Who's Who, Inc., and Jackson Martindell, president of the American Institute of Management, who is seeking to buy control of Who's Who. In a new move, Sammons has asked the Federal Trade Commission to issue a complaint against AIM.

Sammons alleges that AIM violates the FTC act by: Misrepresentation of the quality, character, and benefits of its products and services.

· Misrepresentation of the nature and method of selection of its customers and prospective customers.

· Misrepresentation of its corporate nature, organization, and activities.

In the Appellate Court of Illinois, Sammons is seeking a reversal of the Cook County Circuit Court ruling that permits Martindell to exercise an option to buy 67% of the Who's Who stock (BW-Apr.28'56,p57). Martindell has just filed his answer in this appeal.

Both Sides Claim Fairbanks-Morse

Another long-running battle is nearing its climax. Mar. 27 is the date of the annual meeting of Fairbanks, Morse & Co., the Chicago equipment manufacturer that Leopold D. Silberstein's Penn-Texas Corp. has been trying to take over. The latest P-T report claims ownership or control of 48.7% of the outstanding Fairbanks stock. But Fairbanks' Pres. Robert H. Morse, Jr., still claims that Silberstein won't win.

New Faction Digs in at Butler Bros.

"A profound difference of opinion concerning corporate policies" has caused the withdrawal of Chmn. Hanns Ditisheim from the board of Butler Bros., Chicago concern that owns and services retail stores.

Ditisheim and three other members of the board say they will not stand for reelection at the Mar. 28 meeting. They will probably be replaced by a group of American Colortype Co. officials, led by M. Riklis, chairman of the Chicago printing company, which has recently acquired some 10% of Butler's outstanding stock. This will give Riklis a majority on Butler's nine-man board, since B. G. Cantor, vice-chairman of American Colortype and a recently elected director of National Theatres, Inc. (BW -Mar.2'57,p167), is already on the board.

But Peace Comes to Gray Mfg., Seiberling

At least one battle has been settled bloodlessly. Walter E. Ditmars, president and treasurer, and six other directors resigned from the 11-man board of Gray Mfg. Co., Hartford (Conn.), producer of dictating machines. The Ditmars contingent had been under fire from a stockholders' committee headed by Ralph E. Casey, president of the American Merchant Marine Institute, Inc.

And peace was declared at Seiberling Rubber Co. Edward O. Lamb, Toledo businessman who got himself and three colleagues on the 15-man board in last year's proxy fight, reached an agreement with management in which both have endorsed a single slate. Lamb recently increased his holding from 73,000 shares (17%) to 88,700.



HIGH-STRENGTH SEAMLESS TUBE PRODUCTS, MADE AT JOL'S ALIQUIPPA (PA.) WORKS, MAKE POSSIBLE DRILLING FOR OIL AT RECORD DEPTHS

PHOTO BY MASSAS

J&L-A Great Name in Steel ...

Growth Company in a Growth Industry

Growth is not only "more." It is many other things as well.

Important as "more" is to the steel industry, called upon to meet the needs of a growing America, other aspects of growth are important, too.

One of these is "kinds" of steel. Not alone "how much?" but "how much of what kind?" The ability of the steel industry to produce the kinds of steels needed for modern living and for defense—this is one of the

many contributions that make the steel industry truly a growth industry.

And Jones & Laughlin, on its record of producing the

kinds of steels that will do the increasingly difficult jobs required by American technology, truly is a growth company in a growth industry.



Jones & Laughlin



Properly engineered color plan in the E. W. Ferry Screw Products factory increases productive skill and reduces danger of time-loss accidents

working conditions
in plant that makes
1½ million
screws daily

NEXT TIME you select color for work areas in your plant, discard old-fashioned haphazard methods and do it the up-to-date way—with Pittsburgh COLOR DYNAMICS.

By selecting colors according to this modern system of painting you can improve productive efficiency of your workers, enhance morale and reduce danger of accidents.

An example of such results is found in the Cleveland, Ohio plant of E. W. Ferry Screw Products, Inc. This company produces more than a million and a half fasteners of many types daily for the automotive, airplane and household appliance industries. Besides making conventional screws, it pioneered the development and use of stainless steel screws in volume.

Several years ago the Ferry plant was painted according to COLOR DY-NAMICS. The benefits from this are summarized by Robert E. Ferry, vice-president of manufacturing:

"It had been our custom to paint plant and equipment largely for the purpose of protecting them against wear and deterioration. Then we decided to color-engineer our facilities the COLOR DYNAMICS way.

"Focal colors on working parts of machines, in contrast to eye-rest color on stationary parts, help our workers see their jobs better. We have further reduced eye strain by using restful colors on walls and colors with high reflectance on ceilings. This has reduced physical fatigue and improved concentration. Safety colors which denote hazard areas have lessened danger of accidents. All this has contributed to better workmanship. Relations between management and workers has been improved. It is highly satisfying that we have been able to get all these advantages at no greater cost than normal maintenance painting."

You can test the practical value of COLOR DYNAMICS in your plant. Try it on a machine or two, or in a complete department—and see the difference it makes.

HOW YOU CAN GET A FREE COLOR PLAN OF YOUR PLANT

• We'll be glad to mail you a free copy of our fully-illustrated book which explains the principles of COLOR DYNAMICS and how to use them in industry. It contains numerous practical suggestions. Better still, we'll be glad to prepare a color plan suited to your type of plant, containing detailed specifications, without cost or obligation. Call your nearest Pittsburgh Plate Glass Company branch and arrange to have a representative see you. Mail coupon at right.

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ITTSBURGH PLATE GLASS COMPAN



ADMINISTRATORS of Associated Colleges are (left to right) Dr. Robert Bernard of Claremont College; D. Frederick Hard of Scripps; Dr. E. Wilson Lyon of Pomona; Dr. George Benson of Claremont Men's; and Dr. Joseph Bevan Platt of Harvey Mudd.

College Co-op Adds a Member

Harvey Mudd College, a new science and engineering school, will share the campus and faculty of the Associated Colleges group.

NEXT FALL, the Associated Colleges of Claremont, Calif., will have to make room on its sign for another name. The newcomer is Harvey Mudd College, the first school of science and engineering to be founded in this country in over two decades.

In addition to becoming the newest member of the unique Associated Colleges, Harvey Mudd College is pretty unique itself. It is being founded to help answer industry's plea for engineers and scientists with a broad base of both sciences and humanities.

This crying need was pointed up recently in Little Rock, Ark., when General Electric Co. decided to locate a new plant elsewhere, chiefly because Little Rock had no facilities where company engineers could further their education. As a direct result of the blow, Arkansas legislators are considering a bill to build a Graduate Institute of Technology in

· Sharing the Campus-When Harvey Mudd calls the roll next September, it will own just one building-a dormitory that is now under construction (picture, page 78). But the first class of 60 students will not meet under the trees. They will share or borrow just about all they need in the way of buildings and facilities until their own campus is complete. They also will have access to a diversified faculty.

Harvey Mudd isn't moving into facilities vacated by others. Rather, as a member of the Associated Colleges of Claremont, it will share many of the organization's existing facilities. This group of small colleges includes Pomona College, liberal arts, coeducational, founded in 1887; Claremont Graduate School; Claremont Men's College, which bears down heavily on liberal arts while emphasizing business administration and pre-law; and Scripps College, a woman's college.

These colleges work under a loose federation that permits each to maintam its independent and small-college characteristics and at the same time enjoy the obvious advantages of banding together on such things as buildings and faculties. By joining up with Associated Colleges, Harvey Mudd will be able to operate at full speed from the beginning.

· Broad Base-Harvey Mudd will follow curriculum methods that other colleges and universities are considering,



Realistic...to build sales

To build sales appeal and improve authenticity for plastic toy cars, manufacturers use nitrocellulose lacquers. These specialty coatings based on CARBIDE's solvents resist crazing; overcome problems of gloss and adhesion. The wide selection of CARBIDE's solvents also make them key ingredients for other lacquers which range from furniture to automobiles.

PACKED...IN A CUSHION OF FOAM

Shipping protection for delicate and sensitive equipment is often an expensive problem. A new system of foamed-in-place polyurethane promises an answer to the problem with rugged, custom-made protection. Chemicals such as glycols and polyols are used in the production of these foamed polyesters.

SALES BUILDER: "WASH 'N WEAR"

Use of cotton fabrics has spread from daytime dresses to luxurious evening wear. Cottons are now easier to care for, are crisp, and smarter looking. Why? Carbide's ethylene diamine is the key to today's new ethylene urea resins for "wash'n wear" fabrics.



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DORMITORY going up on Harvey Mudd campus will house first batch of students.

or may already be putting into practice. But Harvey Mudd will have the advantage of starting fresh. Obviously it can move faster than older institutions that get involved in some sort of transitional period.

In addition to stressing a broad education, Harvey Mudd will insist on a broad basis of science itself. Dr. Joseph Bevan Platt, first president of the new school, says: "When you consider that a great deal of what scientists and engineers are working on today was unknown 10 years ago, you realize the big problem you face in attempting to train satisfactory engineers and scientists for 10 years hence. Actually, you are trying to train them for work in fields that may be nonexistent today."

For that reason, Platt feels it is important to give engineering and science students a broad study of fundamental sciences and to teach them the procedures of research, so that they will be able to solve problems that can't even be anticipated at this time. So, instead of following what Platt refers to as "cookbook procedures," students will study fundamental mathematics, physics, and chemistry. They also will study basic research procedures.

• Parallel Curriculum—To round out the program, Harvey Mudd will stress humanities to the point that each student will be required to take a minimum of 35% of his courses in these subjects. Here, again, the college will depart from the general liberal arts college that offers a pre-engineering course. Platt uses geometric figures to

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explain the curriculum difference. At a liberal arts college, an engineering student would probably follow a course of study that would be similar to a pyramid. That is, he would start out with a broad base of general studies during his freshman and sophomore years. Then, during his junior and senior years, he would specialize in his major field, building to an increasing peak of specialization.

At Harvey Mudd, the curriculum will follow a pattern of two parallel columns, one slightly narrower than the other. During his first two years, the student will have a broad base of humanities and basic sciences and mathematics; then, during his last two years, he will continue to develop both fields. "There is no reason why an engineering student should not also take an advanced course in philosophy in his senior year," Platt

says.

This means that a student can't specialize in one field to the extent he could at some engineering schools. But Platt believes that engineering has developed to the point where a bachelor's degree is little more than the first step. He feels that the broad training students will receive at Harvey Mudd will enable them to delve into fields that are as yet non-existent, and to relate their findings in terms that will be understandable to the layman.

 The Risks—Despite the appeal of this sort of curriculum, the founding of such a college is no simple undertaking. Few would chance it, even those blessed as Harvey Mudd is with a healthy endow-

ment.

First, Harvey Mudd is being founded as a small private college with a planned enrollment of 350, a student-faculty ratio of 8-to-1, and a tuition of \$400 a semester. Second, it is being founded in California, where an estimated 80% of all college students now attend state-supported colleges and universities. These facts are raising eyebrows among other small colleges that constantly face the danger of losing not only their students but their faculties to the lower tuition and plushier facilities of state universities. But Harvey Mudd is a tribute to the educational program of Associated Colleges of Claremont.

The pattern for the Claremont group was conceived in the 1920s by the late Dr. James A. Blaisdell, president of Pomona, to help provide facilities and cultural opportunities comparable to those of a large university, and yet allow each college to maintain its independence and its own small-college

flavor.

 Management Setup—The association itself has become an interesting management situation. All programs common to the five schools are administered under the name of Claremont College.
 Dr. Robert J. Bernard, who is serving his 40th year with the association, is managing director of Claremont College. The Board of Trustees of Claremont Graduate School also serves as the Board of Fellows of the association. The job of provost of the association is rotated among the presidents of Pomona, Scripps, Claremont Men's College, and Harvey Mudd on a two-year basis.

Claremont Graduate School has no president. Claremont College was founded to oversee the functioning of Claremont Graduate School, to administer joint undertakings of the Associated Colleges, and to provide the initiative for founding new colleges. Dr. Bernard, as managing director of Claremont College, is administrative head of Claremont Graduate School—working with the Board of Fellows and the four presidents. Dean Luther J. Lee is academic head of Claremont Graduate School.

Under this setup, each president is the true head of his own college and answers only to his own board of trustees. At the same time, he is in on the decision-making for joint undertakings by Claremont College. The stint as provost safeguards against any president ever assuming a parochial role. While he holds this title, he is as responsible for the welfare of the association as he is for his own college.

• Joint Undertakings—Officials of the colleges emphasize that their setup cannot be compared with that of a university. For the operation of their colleges, presidents are free to plan, to choose, to develop as they wish. But because of the tie-in, each of the small colleges enjoys the advantages that come

through size.

Among other joint undertakings, the group has a committee to study educational needs and to plan new colleges. It was this group that pushed the founding of an engineering college and convinced the Mudd family that it would be a suitable memorial to the late Harvey Sceley Mudd, Los Angeles mining engineer and civic leader, who had been a fellow of Claremont College.

• Inheritance—When it became a member of the Associated Colleges group, Harvey Mudd automatically inherited about a third of its needed facilities. Thus, it will open its doors with certain tangible and intangible advantages that many small colleges attain only in the course of years. In addition to a unified business office and telephone exchange, the college will share a library of 260,000 volumes, a fine auditorium, a chapel, infirmary, faculty house, and the Claremont Science Center.

Also, Harvey Mudd will share a student union with Scripps and CMC, and will borrow classrooms, laboratories, and dormitories from CMC until its own campus can provide these facilities. The colleges also have an academic program whereby students from one school may take classes at another.

Prorating the expenses of these facilities involves juggling nine different budgets with different formulas figured out to ascertain what percentage each college should pay. For instance, there is a central heating plant, and each college is billed according to the heat its own campus uses. On something like the health service, the association takes a student nose count and charges each college according to its enrollment.

• Drawbacks—While Harvey Mudd is

 Drawbacks—While Harvey Mudd is starting off with a heavy endowment, eventually it will find it necessary—as all colleges do today—to appeal to business, industry, and individuals for gifts of money and equipment. Harvey Mudd, by its very purpose of training engineers and scientists, is in an excellent position to attract these gifts. But there are other problems that all colleges in their founding must face.

First, the new college cannot be accredited until it has graduated its first class. This in itself will close many doors during the first four years—a major one being that the college will not be eligible for GI Bill of Rights provisions until it has attained that accredition.

Second, Harvey Mudd won't have alumni for four years. That closes other important financial doors. It will not have alumni gifts, of course, and will not be able to participate in the increasing number of corporation programs that meet employee gifts to their alma mater with like or percentage gifts.

Third, the college has a relatively high tuition. However, Dr. Platt hopes to provide scholarship aid for at least a third of the students on a consistent basis. And, with the increasing interest of business and industry in helping to educate scientists and engineers, Harvey Mudd is in a good position to attract scholarship fund.

• Prexy Platt—Dr. Platt, 40, a nuclear physicist, brings a background as broad as he hopes to develop for the college he heads. Following high school in Rochester, N. Y., he went to sea on an intercoastal freighter. At the University of Rochester, he edited the college yearbook, starred on the swimming team, and made Phi Beta Kappa.

He received his Ph.D. from Cornell in 1943, and after two years of teaching, worked on radar at MIT. During the war, he tested radar systems, flying with bomber squadrons until the personnel could be trained to use them. After the war, he returned to the University of Rochester to assist in the building of a cyclotron to produce mesons. In 1949, he became chief of the research division of the Atomic Energy Commission, which post he held for two years. END



Cracker Jack Company replaces sash with Glass Blocks...

Saves annual maintenance costs of \$150 per window opening

High maintenance costs for repairing windows used to be a problem at the Chicago plant of the Cracker Jack Company, famous confectionery producer. Two men worked almost full time on window maintenance and the annual bill came to about \$150 per window opening.

This costly, recurring upkeep prompted investigation of glass block panels to replace the old sash. The modernization program won company support, and the panels were installed a few years ago. The Company reports complete freedom from maintenance since installation. Because the glass blocks are mortared into panels, there's nothing to rust, rot, putty, or paint. Hinge trouble is a headache of the past. Breakage is rare. And washing is just a once-or-twice-a-year job.

A string of other plant problems were solved, too. Excessive heat gain and chilly winter drafts are controlled. Glare and worker discomfort from direct sunlight is off the complaint list. Dirt and dust infiltration is no longer

If you are experiencing window problems, or are planning a new building and want to avoid the headaches, you'll find it profitable to know more about PC Glass Blocks. See us in Sweet's, or write Pittsburgh Corning Corporation, Dept. G-37, One Gateway Center, Pittsburgh 22, Pennsylvania. In Canada: 57 Bloor Street West, Toronto, Ontario.



Here's how Cracker Jack Company's plant looked <u>before</u> they modernized their window areas with PC Glass Blocks. The window modernization job (upper photo) was installed by the Expert Building Maintenance & Repair Co., Chicago.

PC Glass Blocks

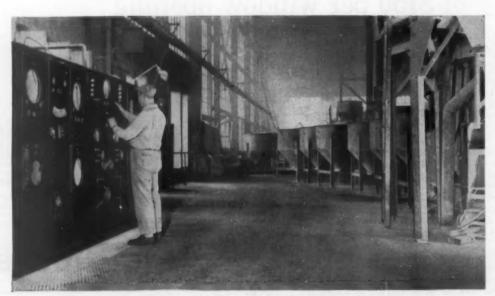


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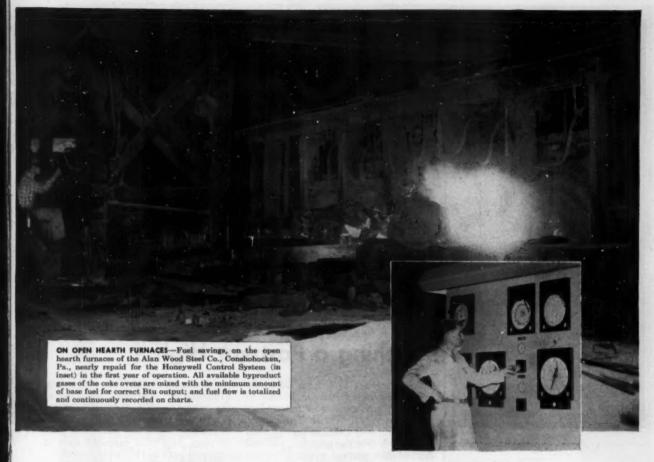


ON ENAMEL BAKING OVENS—Fuel costs dropped 80% when Honeywell Control Systems were installed on Enamelstrip Corp.'s ovens in Allentown, Ps. Waste heat from catalytic oxidation of air pollutants was recovered and returned to the ovens in just the right amount. A separate system measures combustible gas and controls production at peak safe rates. Fuel costs dropped—production rose 400%—insurance rates were reduced 95%.

You CAN beat



ON GLASS BATCHING FURNACES—When Armstrong Cork Co. installed Honeywell Instrumentation in their glass plant at Millville, N. J., its primary purpose was to provide optimum fuel flow control on a process where fuel burned per ton of glass was a major cost factor. In addition to fuel economy, instruments made possible more consistent batch quality, automatic furnace operation and longer refractory life.



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Instrumentation can give you more heat per fuel dollar by increasing heat utilization . . . by making practical the use of byproduct fuels . . . and by permitting a switch in base fuel whenever outside prices and supply conditions make such a shift profitable.

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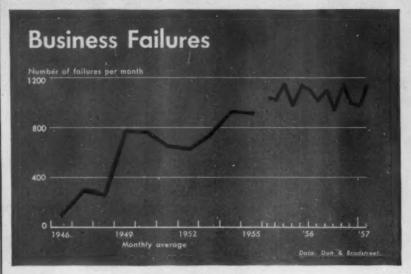




QUINCY COMPRESSOR CO.

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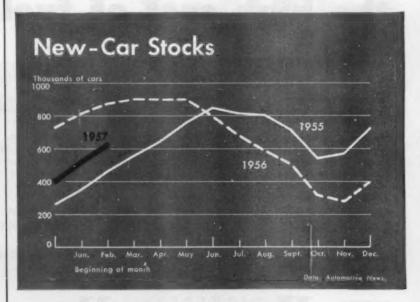
CHARTS OF THE WEEK



Touching a Postwar High

An increase of 17% from December brought business failures in January to 1,148, the greatest number for any January since World War II. This continued a trend – in 1956, failures climbed nearly 16% over the preceding year and established a postwar record.

Concerns with liabilities of less than \$100,000 still accounted for most of the mortality. But there were more failures involving more than \$100,000 in January than in any month for some 20 years. And retail casualties were at a postwar peak in 1957's first month.



Happier Inventory Level

Stocks of new cars in dealers' hands and in transit Feb. 1 stood at 620,000 units, 29% below last year's mark at the same time. On the basis of current selling rates, this stock represents a fiveweek supply, Automotive News reports.

A memo from Arthur Genet...



From: Arthur Genet, Pres. Greyhound Corp., To: Henry Bruner, Pres. Greyvan Lines

Subject: GREYVAN service

I am afraid that when I moved from Cleveland to Chicago last year, I was not as much impressed as I should have been by the efficient way everything was handled and the courtesy and consideration shown by the movers.

At the time I assumed this was special treatment for the

Since then I have been delighted to learn that what I new Greyhound President. got was the standard service accorded every Greyvan

I think you can well be proud of the friendly, intimate service offered by your Greyvan organization -- just as customer. I am proud that Greyvan is an intimate part of Greyhound.

arthur



GREYVAN LINES

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It's a much more ship-shape office when valuable personnel can stay at their desks and get things done. Compact, smart-looking RCA Multi-Com is an easy way to accomplish this. Multi-Com brings you facts you need, answers to questions, key people to meetings . . . and everybody has more time for important jobs. Multi-Com ends switchboard jamming, keeps your board free for a larger volume of outside calls. Multi-Com is precisely engineered to perform dependably over a long life. You can easily plan a Multi-Com system for any size office. Contact the RCA Engineered Sound Distributor nearest you. He's in your Classified Directory under "Sound Systems" or "Inter-communications Equipment."



FOR INTERCOM . . . BUY MULTI-COM

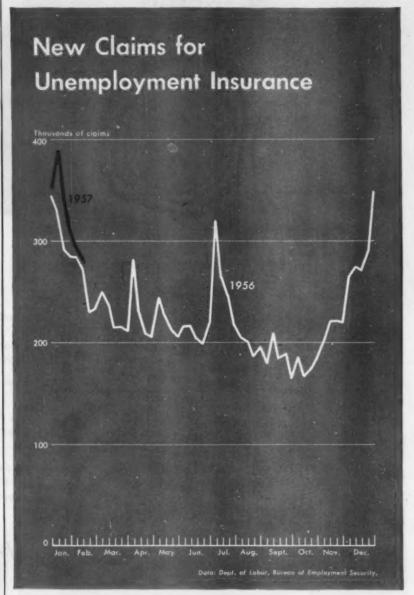


of AMERICA

SOUND PRODUCTS . CAMDEN, N.J.

Reasons for this year's better inventory position include: (1) liquidation of 1956 models, (2) lower production, particularly in November and December, and (3) increased selling this year. Sales

in February were "more favorable than a year ago," Automotive News says. At the current rate of sales, about 70,000 units will probably be added to Mar. 1 inventories.



Longer Lines for Benefits

So far this year, new claims for unemployment insurance have been an average of 9% higher than in 1956. For the week ended Feb. 9, they exceeded the comparable period a year ago by more than 5% — and bested 1955 by a narrow margin as well.

The same situation has prevailed with continuing claims for unemployment insurance. They have averaged 14.8%

higher so far in 1957 – although they're still below comparable 1955 levels. Continuing claims have been higher than a year ago every week since the end of May, 1956, with but a single exception – the week ended last June 30.

Much of the blame goes to recent curtailments in outdoor work, as well as cutbacks in trade, food processing, apparel, glass, and electrical machinery.



Webster defines our slang expression "a gadget" as "a device for doing something; especially, a part of machinery." It's kissin' kin to automation.

Many of the marvels in America's production lines are "gadgets" dreamed up by men tired of doing things the hard, slow way.

We manufacture air-powered work units to make the job of the methods engineer easier. With these integrally controlled power units he can eliminate many cams, gears, levers and mechanical linkages and perform an almost unlimited range of repetitive pull, push or lift motions, smoothly, economically, and in perfect synchronization with any related movement. With them he can convert existing machinery into faster, automatic units, or he can build in his own tool room low cost, highly efficient special purpose machines.

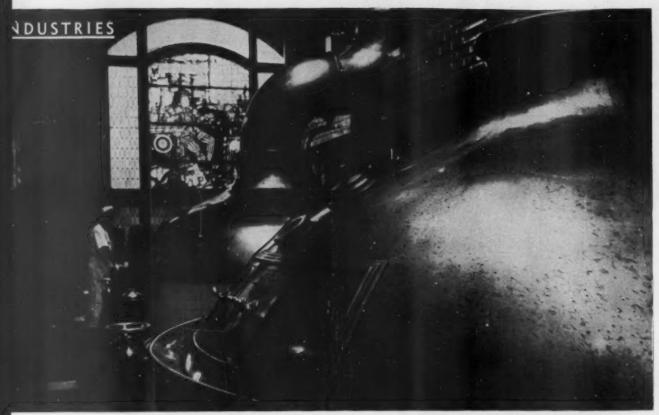


Like to know more?

These free four-color booklets will give you a quick picture of what Bellows "Controlled-Air-Power" work units can do far you. Ask for Bulletins BM-25 and ML-3. Address: Dept. BW-357, The Bellows Co., Akron 9, Ohio. In Canada, Bellows Pneumatic Devices of Canada, Ltd., Toronto, Ontario.

The Bellows Co.

MANUFACTURERS OF "CONTROLLED-AIR-POWER"
DEVICES FOR FASTER, SAFER, BETTER PRODUCTION



BREW ROOM at Pabst plant in Milwaukee (above) has traditional stained-glass window.

OLD CAVES in Miller brewery in Milwaukee (below) at tract tourists. Beer used to be stored here.



New Ideas Shake Up Old Brewing Industry

With costs rising and national beer consumption standing still, brewers are forced into hotter sales promotion.

THE ARCHITECTURE pictured below symbolized Milwaukee as the capital of the brewing industry, just as steel furnaces are characteristic of Pittsburgh and oil refineries speak of Houston. But when the 1956 standings of the brewers came out (page 90), it was a group of aggressive regional companies outside Milwaukee that made the industry take notice.

For the industry as a whole, business has been mediocre for years. Sales have been standing still; costs have been rising. Yet four regional brewers—Falstaff Brewing Cop. of St. Louis, Theo. Hamm Brewing Co. of Minneapolis, Carling Brewing Co. of Cleveland, and Stroh Brewery Co. of Detroit—proved last year that beer can still be sold in a big way.

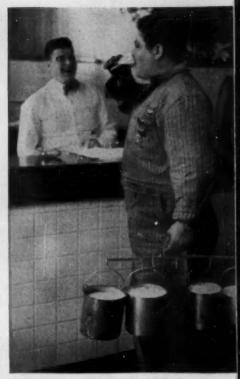
Five years ago, only Falstaff among these brewers was among the top 10 companies. Now the other three are up there, too, with Falstaff fourth and Hamm fifth. Their sales increases last year ranged from 6% to 26% over 1955. None of the older leaders could match this pace.

I. Brewers in Ferment

Until a long strike in 1953 hit the national brands that flowed from Milwaukee, the lines between the various types of brewery were fairly clear:

A national brewer sold all over the country from a brewery in Milwaukee, St. Louis, or one or two cities on either coast. Its sales ran roughly between 3-million and 6-million bbl. a year.

A regional brewer concentrated on a market in from two to six states, often through a chain of small breweries strategically situated in this area to cut transportation costs. Regional brewers may spread their market—Falstaff, for example, serves areas in six states, around St. Louis, Omaha, Fort Wayne, San Jose, New Orleans, Galveston, El Paso—but they move cautiously toward



RUSHING the growler at Miller brewery. By tradition and union contract, employees get free beer for their daily beer-breaks.



TEUTONIC influence is evident in architecture of old Pabst bottle house, perched on highest hill in city.



ODERN contrast appears in design of Blatz bottle house and office building, also in Milwaukee.



HOSFITALITY BAR at Blatz plant is sleek and modern while . . .



MILLER retains German beer hall atmosphere in its guest room.

Story starts on page 88

blanket coverage of the nation. They generally produce 1.5-million to 3-million bbl.

A local brewer usually had just one plant, served one metropolitan area or at most a state. His production might be anywhere from 100,000 bbl.—about the minimum to break even—up to 1-million bbl.

 Beer Barrel Polka—Until a couple of years ago, the sales standings invariably gave the top five spots to the big nationals, with the regionals coming next, and the locals far behind. But the 1953 strike that tied up the national brands for months led to shifts that are speeding up instead of slowing down.

Now the regionals are increasingly challenging the nationals, and some of the locals are branching out as regionals. By volume and sales standing, such regionals as Falstaff, Hamm, and Carling

look more like "nationals" than such brewers as Pabst, Miller, and Blatz, which have always been defined as nationals.

Still, the top nationals continued to grow in 1956, though less than the up-and-coming regionals. Jos. Schlitz Brewing Co., 1955-56 leader, gained about 3% in sales. Anheuser-Busch, Inc., the only close challenger and the 1953-54 leader, gained 4.5%. P. Ballantine & Sons, No. 3, showed a modest 0.3% gain. Miller Brewing Co. gained slightly in sales volume, yet lost 10th place to Stroh; in 1952, Miller held the dizzy heights of fifth place.

Who Gets Hurt-Since the total consumption of beer is about the same as it was 10 years ago—around 85-million bbl.—the gains of these breweries have had to come out of someone else's hide.

Last year, three of the top 10 companies showed losses in volume: Pabst Brewing Co., which dropped from fifth to seventh after having been third as recently as 1954; Liebmann Breweries, Inc., which clung to sixth place, and F. & M. Schaefer Brewing Co., which sank from eighth to ninth.

Much of the remaining volume that shifted to new brands must have come from breweries that went out of business. The attrition rate is high. In 1935, shortly after repeal, there were 750 breweries; five years ago, they were down to 336; now there are 237. Last year alone, 34 licensed breweries closed their doors.

Today the top 10 companies control around 42% of the industry's annual production, and industry analysts see small chance that the trend toward concentration will be reversed. A. Edwin Fein, managing director of Research Co. of America, predicts that in another eight years, 10 companies will produce about 70% of all the beer.

While the industry's total sales have

Beer Sales Standings - Year by Year

1952	1953	1954	1955	1956	1956 SALES * (millions of barrels)
1. Schlitz 2. Anheuser 3. Pabst 4. Ballantine 5. Miller 6. Liebmann 7. Schaefer 8. Falstaff 9. Ruppert 10. Blatz	1. Anheuser 2. Schlitz 3. Pabst 4. Ballantine 5. Liebmann 6. Falstaff 7. Schaefer 8. Miller 9. Ruppert 10. Lucky Lager	1. Anheuser 2. Schlitz 3. Pabst 4. Ballantine 5. Liebmann 6. Falstaff 7. Schaefer 8. Hamm 9. Miller 10. Lucky Lager	1. Schlitz 2. Anheuser 3. Ballantine 4. Falstaff 5. Pabst 6. Liebmann 7. Hamm 8. Schaefer 9. Carling 10. Miller	1. Schlitz 2. Anheuser 3. Ballantine 4. Falstaff 5. Hamm 6. Liebmann 7. Pabst 8. Carling 9. Schaefer 10. Stroh	5.940 5.865 3.966 (est.) 3.870 3.324 3.250 (est.) 3.200 (est.) 2.996 2.710 (est.) 2.708

[&]quot;Source: Brewers Digest.

ALLOYS MAKE THE DIFFERENCE

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S. S. White Industrial Division, Dept. 15A 10 East 40th Street, New York 16, N.Y. Western, Office: 1839 West Pice Bivd., Los Angeles 6, Calif.

"... the new kind of promotion hammers hard at the theme that beer is associated with social approval . . "

STORY starts on p. 88

been standing still for 10 years, costs have been rising relentlessly-for labor, for packaging, for transportation.

II. Market Doldrums

In this kind of market, most brewers have held desperately to their prices. A few have yielded to the pressure and raised prices. Miller, for one, has done this on the theory that there's always a market for a premium product. But Miller has dropped from fifth to 11th since 1952; the strike hurt Miller, and so did the loss of Pres. Fred Miller in a plane crash.

Last year, a small general price increase on cans and non-returnable bottles barely offset the industry's increased

cost of the containers.

• Idle Plants—The stagnation of the market is costly in another way, too. At 85-million bbl. of annual sales, the industry is using only 62% of its capacity. And this condition has prevailed for 10 years. Volume rose in 1947 to more than 87-million bbl., and it dipped to 83-million bbl. in 1950 and 1954. But the 10-year average is 85-million—right on the nose of last year's sales.

Idle plant eats up maintenance and taxes while not producing profit. And the strategy of unions in recent years is to demand a shorter work week at an increased wage, to cut layoffs by spreading the work load. Thus, the

unit costs keep going up.

• In New Places—One reaction of the nationals and the bigger regionals is to get closer to their markets. They find they can save operating and transportation costs by building efficient new breweries here and there around the country instead of, like Miller, sticking to Milwaukee.

As a result, the beer that made Milwaukee famous is more likely today to be brewed in Brooklyn or Los

Angeles.

Pabst was among the first to decentralize out of Milwaukee. In 1934 it built a plant at Peoria, Ill.; in 1946, at Newark, N. J. In 1948 it bought a local brewery in Los Angeles, expanding with a big addition for its premium beer in 1953.

Schlitz of Milwaukee has extended operations to breweries in Brooklyn and Van Nuys, Calif., and this year will start brewing at the old Muehlebach plant in Kansas City, which it bought last June. In 1958 it is scheduled to complete a new brewery in Tampa, Fla.

By then, Schlitz will have five brew-

eries operating. But they won't be brewing in as many localities as, say, Falstaff and Carling among the regional brewers. Each of those companies will have seven plants—smaller, on the average, than the Schlitz plants but strategically placed.

• Lopsided Market—What the brew-

• Lopsided Market—What the brewers really need, of course, is thirstier customers. Market studies by the U.S. Brewers Foundation and other groups show that more people drink beer than ever before, but they drink less per

capita.

To begin with, only half the U.S. population drinks beer. And only 8% of the population consumes 60% of the beer. Economic status doesn't seem to matter—the percentage of beer-drinkers and the amount of beer consumed are about the same in each income bracket. But there's a big variation from one age group to another.

In the 21-year-old to 40-year-old group, 61% say they drink beer, and half the group takes six or more glasses per week. Between ages 40 and 60, the percentage of beer-drinkers drops to 53%, and over 60 years old it goes down

to 33%

Although total consumption of beer hasn't changed in 10 years, the point of sale has. More than ever, today's market is on the supermarket shelves, rather than at the tavern taps. Between 75% and 80% of all beer is sold in the package. (The beer all comes out of the same kettle, but bottled and canned beer is pasteurized and carbonated, to keep indefinitely without constant refrigeration.)

III. Stirring Things Up

The embattled brewers can find two reasons for optimism about the future:

• Postwar population growth has been chiefly at the bottom. For 10 years, the number of young adults—the best beer market—has been declining. In another year or two, the number turning 21 each year will be climbing.

The industry has finally recognized the revolution in its market and is aiming its sales promotion ever more intensively at the customer who picks up a six-pack at the supermarket or neighborhood grocery. A beer carton today has all the color—and frequently the premium coupons—of a box of cereal or soap powder.
Developing Taste—The new kind of

 Developing Taste—The new kind of promotion hammers hard at the theme that beer is associated with happy times, with social approval. Brewers steadily change their product, too, in

How to solve a national shipping problem



Sam had shipments to send out all over the Nation But was swamped by red tape and its endless vexation



Now trouble-free Sam ships throughout the U.S. By speedy, dependable RAILWAY EXPRESS!

The big difference is

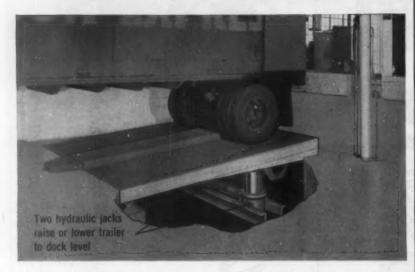
Problem: How long would it take you to set up a shipment to all 48 states—starting right now?

Answer: Just as long as it takes to call your Railway
Express Agent. He's the man who'll solve your most
tangled shipping problems in a jiffy. He'll give
you swift, dependable deliveries, free of red tape
and without added cost. Railway Express is the
complete rail-air shipping service, reaching some
23,000 American communities. And now you can speed
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recognition of the discovery that modern Americans don't really like the taste of beer.

The majority of consumers who are taste-tested say they prefer the lighter beers—the beers that taste less like beer. The national brewers follow this market finding most closely. Their beers get milder and milder, while the local brewers tend to cling to the heavier beers.

There are exceptions, of course. Pabst, for example, last fall bought out Old Andeker, a draft beer with a heavier European flavor. It is said to be a sell-out. Pabst has been swimming upstream, too, by pushing all of its draft beers, claiming to have increased volume by 5% while industry volume was dropping 4%.

By and large, though, the brewers are plugging the social-approval, thirstquencher, and low-calorie themes rather than beer's unique flavor.

 New Management—This kind of marketing calls for a new style of management. In most aggressive and growing companies, you'll find a manager who is closer to Madison Avenue than to the old-line brewmaster.

Pabst, for example, is making its comeback under a new president, Marshall Lachner, who came from Colgate-Palmolive Co., where he was vice-president in charge of soap sales. Though he has switched from one kind of suds to another, Lachner feels the same marketing techniques apply. Pabst is spending more money on flashy packaging, is offering moneyback and premium coupons cashable in salt shakers, barbecue equipment, photographic supplies, and fishing gear. Sales in test-marketed areas have climbed between 7% and 155%.

Conservative Schlitz has a new marketing director—John Toigo, former advertising man for such accounts as Pepsi-Cola and Philip Morris. Now Schlitz is coming out with beer mugs as a premium.

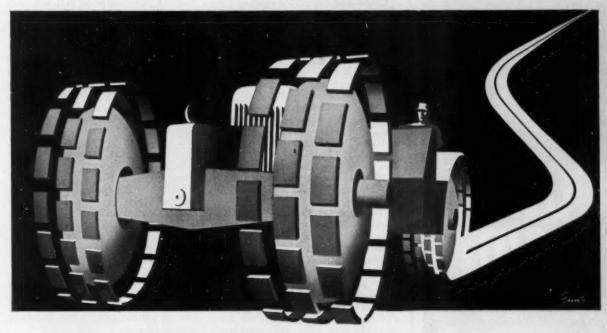
Another top merchandiser is Joseph E. Griesedieck, president of Falstaff, the company that has gone from eighth to fourth place in four years.

to fourth place in four years.

• Cherry-Flavored Beer-Besides trying to boost beer consumption by the confirmed drinkers, breweries are aiming at the non-drinking half of the population. One way is the lightening of beer flavor-Blatz Brewing Co. of Milwaukee has test-marketed Tempo, a milder, much less bitter brew.

However, Weber Waukesha Brewing Co. of Waukesha, Wis., has gone farther afield than anyone else. It has a product, developed by Wahl-Henius Institute of Chicago, that's called Sassy Brew. It's an alcoholic malt beverage of about the same potency as beer, but it comes in cola, cherry punch, and Collins flavors.

STEEL MONSTER LEVELS THE MILES



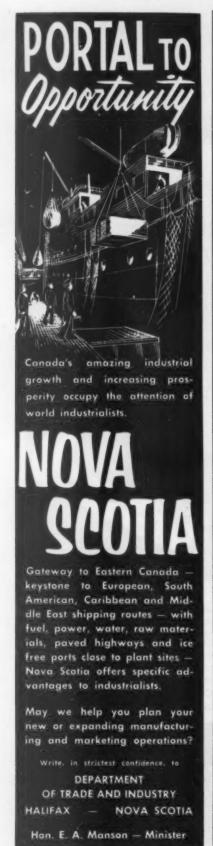
■ A versatile new member of the roadbuilding team is rolling your way. Able when called on to combine the work of two separate machines, this giant earth compactor means potential savings to you in the government's multi-billion dollar highway program.

The all welded frame is Lukens steel plate. Two saucershaped Lukens steel heads form the hub of each massive wheel—a notable innovation in design. A triumph of cooperative engineering, it is another example of a manufacturer teaming up with Lukens, tapping its specialized knowledge, choosing wisely from its wide variety of special steels. This has been going on at Lukens for a long time. In fact, when the first wagon trains lumbered westward over the Oregon Trail in 1842, Lukens had been a leading plate mill for seventeen years.

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:10

"Make It Pay!" in Tidelands

Glamor days are over for offshore oil. Production is rising but the costs are grim, creating tough marketing problem for the added crude.

In offshore oil, the glamor days are over; the make-it-pay stage has arrived.

Since the state of Louisiana held the first sale of offshore leases, on Aug. 14, 1945, operators have poured \$1.5-billion into the tidelands. Production has risen from a trickle in 1946 to last year's 40.2-million bbl. of crude and 124billion cu. ft. of natural gas in the Gulf of Mexico alone. Louisiana, much the most active area, produced 40-million bbl. of crude, to 200,000 bbl. for

California's offshore output is hard to measure because it is lumped in with onshore production. But California has had successful slant drilling-from beach to water-for years. In wells drilled, Louisiana led with 512, followed by 42 for California and 36 for Texas.

Despite all this bustle, income remains a weak point. Revenues since the start have added up to less than \$250-million-a puny 11-year return on a \$1.5-billion investment.

To get some heft into their earnings ratio, the offshore operators this year plan to stress production in their "development wells," according to a survey by Petroleum Week, a McGraw-Hill publication.

"Development well" has a different meaning offshore from onshore. Offshore, the well is likely to be the confirmation of a discovery; onshore, it's part of the pattern drilled to establish the limits of a new discovery. The offshore people are finding that their rugged costs make it too expensive to prove up a new discovery by repeated drillings. So they're going to cut down on exploratory wells, and concentrate on production from development wells. Take these samples of 1957 drilling plans:

· One company expects to drill 135 development wells, only eight for exploration.

• A group of companies puts 53 of its 60 projected wells in the develop-

· Another company plans 49 development wells out of 65.

· Deadline Trouble-The low return isn't the only factor pushing the offshore operators to stress development wells. The expiration dates on their leases are just as important; to validate a lease beyond the usual five-year term, the operator must have drilled to confirm a discovery.

Many five-year leases will run out this year, with far more expiring by 1960.

To get the lease, the operator has paid through the nose. For a choice area off Louisiana, he may have paid a \$7.5-million bonus for a 5,000-acre block, plus a rental fee (50% of the bonus per acre for state leases), or a royalty fee of one eighth of production. Louisiana has already taken in \$140-million in bonuses, rentals, and royalties.

To protect this investment, the operator has to drill-and drill on every lease he holds, not just on one of several. Indeed, many in the industry feel that it's not enough to find and then cap a well. Lawyers are still arguing the point, but a lot of people are convinced that to validate a lease they have to be

actually in production.

That belief means a surge of "let's play safe" production, with attendant marketing problems; Louisiana thinks its offshore production may jump 20-million bbl. this year, compared with a 15-million bbl. boost in 1956. It's not just a matter of more oil to sell; offshore oil is more expensive to produce, hence at a competitive disadvantage with onshore crude, and above all with

Costs are the No. 1 misery of the offshore people. At least one executive in the trade says that if they keep on rising, the whole offshore business might be ruined.

Offshore rigs have to be bigger and more expensive than even the mightiest onshore types; they cost \$700,000-\$800,000 as against \$500,000. A tender runs to \$1.5-million, a mobile drilling rig from \$2-million to \$5-million, a large self-contained drilling platform about \$1.5-million.

A few operators who got into offshore work early are still in fairly good shape. Leases were cheaper then, production could be had closer to the shore. It's the newcomers who find the cost barrier so formidable. One company (with assets in the billions) figures it will take 14 years to write off its capital expenditures; and that will require an investment of around \$634million.

Whatever the offshore obstacles, the dream of immense reserves keeps interest high. Estimates vary, but everybody admits there's a lot of oil offshore. One guess has it that there's between 10billion and 12-billion bbl. underlying the Gulf of Mexico, another 3-billion bbl. off California. Total gas estimates run between 50-trillion and 75-trillion cu. ft. END

Power House Auxiliaries



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Only Allis-Chalmers designs, builds, tests and applies all major station auxiliaries. This assures the utmost in integrated engineering and undivided responsibility... meets today's conditions of high load factor and continuous availability.

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A-512

Motors and Pumps—

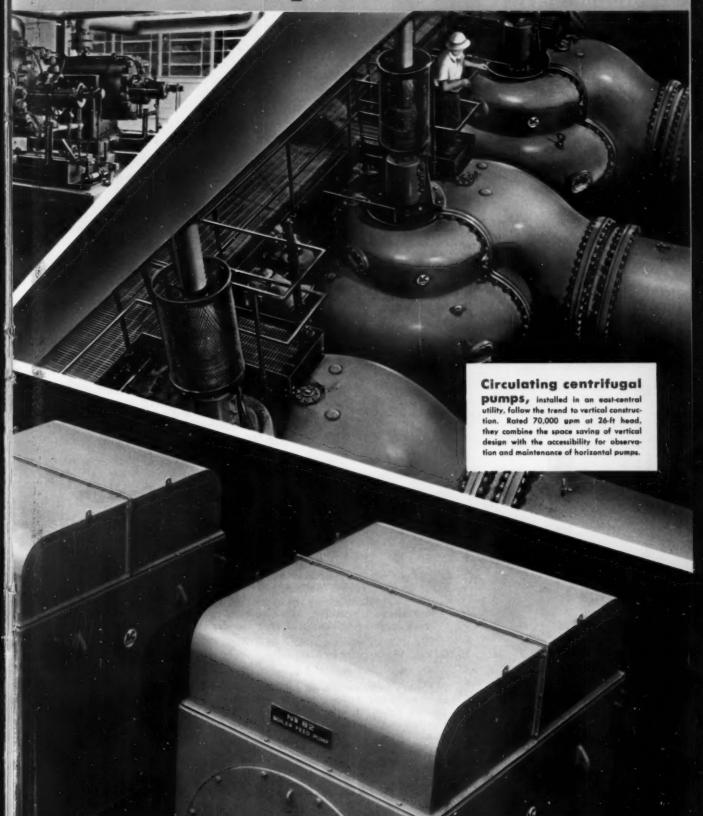
Boiler feed pumps combine fullyproven designs into one modern Allis-Chalmers construction to handle today's higher pressures. Advanced engineering permits greater access for inspection plus radial expansion of inner casing.

These 11-stage units are in service in a southern utility. They have a rating of 525,000 lbs/hr at a discharge pressure of 1820 psig, 350 F.

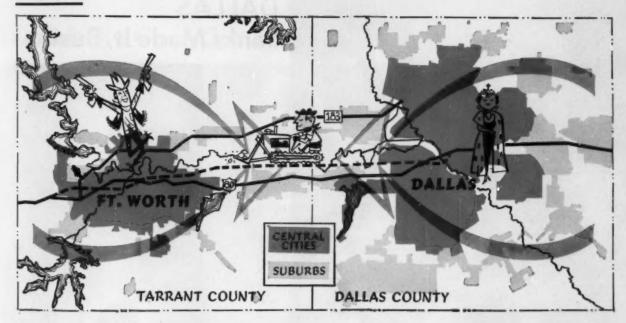
Power house motors built by Allis-Chalmers are known for their cool performance. With air-to-water heat exchangers, uniform, low operating temperatures are maintained. They're quiet too, minimizing noise levels in the motor room.

The 3000-hp, 3585-rpm motors here drive boiler feed pumps in a large eastern utility.

Proven by Installation







Can Feudists Grow Together?

Fort Worth is cattle and the West, Dallas is cotton, banks, and the East, and they've been fighting since Dallas grabbed the first railroad that pushed into the area.

But oil fuels both their economies, and now industrial expansion is bringing them face to face, providing new road links, spurring tentative hands-across-the-fence moves to build for joint future growth.

An ancient Fort Worth axiom holds that "Fort Worth is where the West begins, Dallas is where the East peters out." The more sophisticated Dallas offers no rebuttal, preferring to ignore such impudence.

But in the jest there is considerable truth. Signposts that direct a hesitating traveler toward one or the other of the neighbor cities (cover) point the way to communities with two distinctive personalities:

• Dallas is Eastern—at least by Western standards—and still related to the cotton economy of the South. It's a city of high fashion and high finance, a city resembling many in the East that are centers of wholesaling, trade, and services and a city of branch offices. It prides itself, too, on being a patron of the arts.

 Fort Worth is oriented to the cattle and grain of the West. It takes life more simply and more leisurely, thinks of itself as having fun and offering fun to farmers and ranchers who come to town for the Fat Stock Show. The distinctions between the two places aren't only man-made. Even nature acknowledged the disparity between the two cities a mere 32 miles apart. Remarkably near the line that separates their adjoining countries soil changes character: It's blacker as you go east, toward Dallas. And the drought notwithstanding, Dallas' normal rainfall is greater.

• Lion and Lamb—Rivalry and feuds were predestined for the two by their proximity. These have been advertised well. But nowadays even a passing visitor can't escape the feeling that perhaps the slightest hint of moderation has set in. As you look deeper, you find that evidences of an abatement of the storm of bitterness have been piling up, and today the change is unmistakable.

For one thing, the arch protagonist of Fort Worth, publisher Amon G. Carter, died in 1955, and with him went the art of needling Dallas.

More fundamentally, postwar industrialization has so expanded the city limits of the two and their suburbs that 1957 finds them encroaching on one another.

Dallas is also growing toward the northeast, away from Fort Worth. But as the two cities front yards begin to overlap, necessity is driving them to work together on mutual problems, such as planning. With some of the bitterness dying down, the atmosphere is more conducive to such cooperation.

 Race Against Odds—That either city should have amounted to much has dismayed economic geographers. Neither is on a navigable stream, nor has it natural resources at hand. Oil may have substantially enhanced their fortunes, but there's not a well in either county.

How, against the odds, have they become major cities—market centers and centers of manufacturing? And how will they cope with the expected near-doubling of the population of the combined metropolitan areas from today's 1.3-million to 2.4-million by 1975?

The following pages tell how transportation, oil, and aircraft have helped to shape the present, and how an unaccustomed cooperation is beginning to shape the future. It's a story also of how the greater drive of Dallas' merchants, wholesalers, and bankers has kept that city ahead in the race with Fort Worth's more leisurely Western types. To say that isn't to disparage Fort Worth, for in a way it's notable that Fort Worth has survived at all in the shadow of the Dallas that you see on the next page.



BANKING Dallas is financial center for Southwest, with biggest banks in South, district Fed bank, insurance headquarters.

DALLAS Banks Made It, Business

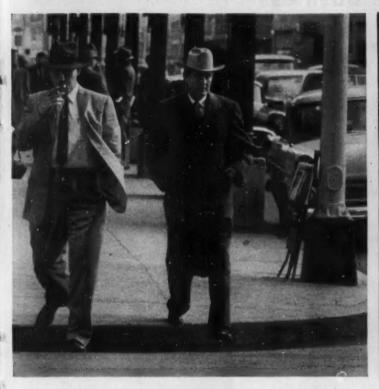


CROWDS Downtown Dallas is always



GOOD LIVING Dallas has it in fine restaurants (right, Old Warsaw), plush clubs.

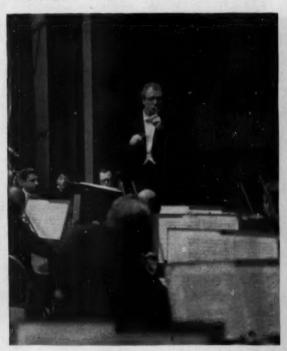
Leads Its Civic Growth and Guides Its Varied Life



congested, with a business area closer-packed than Fort Worth (p. 104).



FASHION Neiman-Marcus' weekly show sets pace.



MUSIC Walter Hendl conducts Dallas Symphony Orchestra; city has summer musicals, arena theater.

BUSINESS WEEK • Mar. 9, 1957

Regions 103

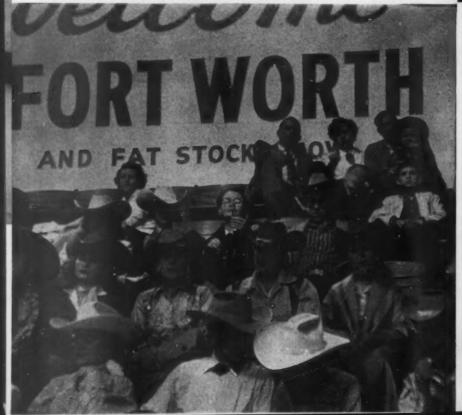
FORT WORTH Marked With the West's Brand, It Mixes Fun With Its Business

Story continues on page 108



LEISURELY PACE comes easier in Fort Worth than in Dallas (p. 102).

FAT STOCK SHOW, held recently, is highlight of Fort Worth's winter.





COWTOWN is still Fort Worth's





popular name, from its stockyards (above)-though aircraft manufacturing is now its largest employer.





STEAK and baked potatoes is favorite Fort Worth diet, and staple at Cattlemen's Cafe (above), near stockyards. Another place, the Big Apple, goes for barbecued ribs.

CLUB life for businessmen is dominated by Fort Worth Club (left)-long headed by late publisher Amon Carter, now by oilman Sid Richardson.



Tiled wall designed by John & Earline Brice.

MEW DIMENSIONS IN DECORATION—The versatility of Styron extends through every room in the house in the form of handsome, colorful plastic wall tile. This laundry area with its stunning "checker" wall would be the envy of any home-

maker. Practical? Of course. Wall coverings made of Styron assure permanent beauty, lasting satisfaction, low cost... and general-purpose Styron is specifically designed for high speed molding and accurate dimensional control.

Versatile Styron sets the

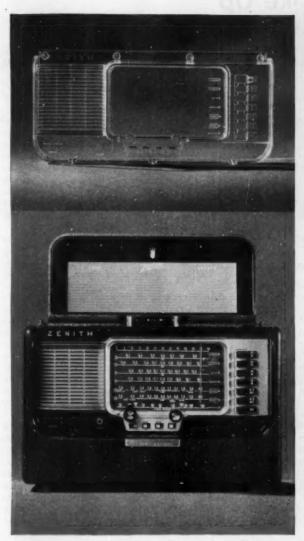
Styron® (Dow polystyrene) has played a major part in the increased use of plastics in industry. With eleven different formulations, Styron offers designers and molders the right plastic for the specific job. Coupled with recent advances in fabricating methods, Styron makes

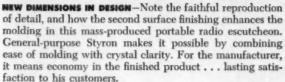
possible many new plastics applications with improved design and performance. And by pinpointing the material to the job, Styron can effect important economies in manufacturing.

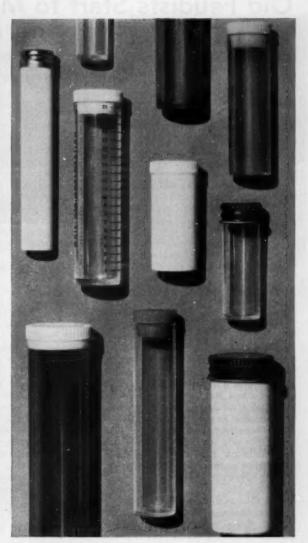
As a major supplier of thermoplastic raw materials, Dow places its extensive research and technical service facilities at the disposal of business men interested in the dynamic plastics industry.

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Old Feudists Start to Make Up

Story starts on page 102

Dallas' cultured cosmopolitanism and mercantile atmosphere, and Fort Worth's breezier, cattle-based Westernism present a study in contrasts. Yet though the two cities have gone their separate and mostly hostile ways, the common thread that runs through their development into the sprawling industrial complexes of today furnishes a link that is replacing the name-calling.

Even in industrial growth, though, there are differences as well as similarities—and not only the difference in size between Dallas' 434,462 inhabitants at the 1950 census and Fort Worth's

278,778.

For both, heavy manufacturing has been pretty much out of the question. Among lighter industries, Fort Worth depends to a great extent on agricultural product processors. Dallas' manufacturing is much more diversified. Still, Fort Worth-with the largest airplane plant in the area and with its packinghouses and flour and feed millshas 31% of its workers employed in manufacturing, against 25% for Dallas. Spurs to Growth—But when you look back to find what started the two cities on their way and kept them growing, you find a similar pattern in the two. First of all came good transportation.

By scheming and persuasion, the two cities won for themselves railroads and highways that very easily could have gone elsewhere in their vicinity. Taking advantage of location and transportation, they nailed down their economic roles as market centers.

Since Dallas' smaller market area of cotton farms was more dense and lucrative than Fort Worth's vast expanse of cattle ranches and wheat fields in West Texas, Dallas got a healthy head start. The nucleus of trade and finance attracted service industries and professional men; but the banks and insurance companies drew more of these to Dallas, giving that city a higher per capita income—sustenance for its cosmopolitan way of life.

• Oil to the Rescue—Yet Fort Worth would have been in sad shape if it had continued to rely solely on the cattle trade, because the trend in Texas' cattle population has been to East Texas. Dallas, relying on cotton, would have suffered with the swing of cotton to irrigated areas in West Texas.

What saved both cities and gave the spur to growth without which they wouldn't be where they are today—was oil. The purchasing power unleashed by major discoveries of oil—the Ranger field in 1917 for the Fort Worth marketing area, the East Texas field in 1931 for Dallas—provided an enormous stimulus. Today oil is the underpinning

that sustains almost everything else. It brings spending power, employment, the wealth of independent oilmen and major oil company executives, and banking strength, especially in Dallas.

It was only when World War II brought large aircraft plants to both cities—the third big spur to growth—that either one really got into manufacturing. In aircraft and similar fields, there's a sort of balance. Dallas has Chance Vought Aircraft, Temco Aircraft, and Ford. Fort Worth has Convair Div. of General Dynamics, Bell Aircraft, and General Motors. But manufacturing still furnishes the smaller share of employment for both.

I. No Holds Barred

When you look at the details of this broad picture of growth, you find first one of the cities spurting forward, then the other—with both fighting each other tooth and nail for advantage.

When the Army in 1849 picked a bluff at a fork of the Trinity River for a fort to fight the Indians, Dallas already numbered about 350 people. In those days, transportation between the two places was elementary, and they grew pretty much independently of one another. But the rivalry had already set in. As settlers from the South moved westward. Dallas tried to hold them by warning they'd be scalped if they went farther West, toward Fort Worth. The people who located around the Army camp at Fort Worth countered by sending scouts east of Dallas to urge settlers to bypass Dallas and come to friendly Fort Worth.

Transportation was the first need. John Neely Bryan, a Tennesseean who had settled at another fork of the Trinity in 1841 and established Dallas, asked the Texas legislature to improve a trail that would provide a stagecoach route to St. Louis. Navigation on the Trinity was tried as early as 1866, but one voyage was enough to prove it was impractical—even in those days the Trinity wasn't deep enough.

• Dallas' Way—It was the railroads that really made Dallas at the beginning. Its merchants, aware of the opportunity rail connections would bring, learned that the Houston & Texas Central was headed north from Corsicana, 55 miles away, but was going to bypass Dallas nine miles to the east. They bridged the gap with \$5,000 cash, 115 acres of land, a three-mile right of way.

To get the Texas & Pacific, coming in from the east, to go through Dallas, the city first got through a rider on a state T&P land grant saying the road must pass thre 1gh Dallas. When that

didn't work, Dallas had to put up \$100,000 and a broad right of way. That was in 1873.

Fort Worth badly wanted the T&P to come on west, but the panic of 1873 held things up three years.

• Beat for Fort Worth—It wasn't until 1881 that Fort Worth got a real beat that lasted until two years ago. One of its editors spotted a Santa Fe Ry. man in a Dallas hotel, offered the road \$75,000 if it would run its line through Fort Worth before Dallas got a chance. It wasn't until 1955 that a 49-mile spur put Dallas on the Santa Fe main line (BW—Nov.13'54,p179).

Dallas had become the place where East Texas cotton farmers bought their needs; it soon acquired small factories and distribution warehouses. Fort Worth was the last civilized place for cowboys to stop on their cattle drives to the Kansas railheads; the nearby Chisholm Trail provided much of the traffic. Ranchers came to town to stock up. The invention of barbed wire made cattle ranching a real business and Fort Worth a distribution point. Stockyards came in 1890, and in 1901 Fort Worth raised \$100,000 to bring in Armour and Swift packinghouses—and give the city a big lift.

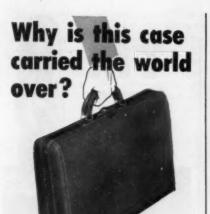
• Boost for Dallas—After the turn of the century, finance took the spot-light and gave Dallas a couple of boosts. With slogans such as "keep Texas money in Texas," the legislature was persuaded in 1908 to require insurance companies doing business in Texas to invest in the state 75% of their reserves on Texas policies. Most Eastern companies didn't like the idea,

and left.

Local interests then established local insurance companies, which invested premium income in Texas developments—municipal bonds and industrial securities. Dallas, already a large banking center, drew most of the new insurance companies. Today, it has more home offices of insurance companies than any other city in the U.S., though most of them are small.

In 1914, Dallas got another scoop. Many Texas cities were angling for the district bank in the newly established Federal Reserve System. Dallas, getting wind that a Cabinet member was en route to scout the area, sent men to board his train at St. Louis, had him sold before he reached Dallas.

• Oil Money—Discovery of oil—first at Corsicana, southeast of Dallas—set off a battle for oil companies. The really significant oil development, however, came with discovery of the East Texas field in 1931 in Dallas' market area. It resulted in state regulation



combines distinctive appearance, expert craftsmanship and convenience, making it a favorite with discriminating men. Madorof handsome top grain cowhide in a wide choice of colors. At all fine luggage and department stores.

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COWBOYS swap stories at Fort Worth stockyards after selling cattle.

and proration of oil production and stabilization of oil prices.

Dallas bankers—already doing business on a regional scale while others were local—took another step. Men such as Fred F. Florence of Republic National Bank and Nathan Adams of First National had the vision—or audacity—to regard loans on oil as a banking proposition. With proration and price stability, they developed a large volume of oil business before others got in. Today, between them, they have almost \$200-million in oil loans.

II. Banks and Business Rule

Just as oil really made the Dallas banks, the banks have made Dallas. In their fierce competition, they have built themselves to such stature (Republic National's capital and surplus are \$75-million) that they are able to make large loans, and many borrowers haven't had to go to New York or Chicago any more. (Of course, they still occasionally invite Eastern banks in on deals they really could handle themselves.) In the Southwest, they have a vast system of correspondent banks, and often figure in deals made in Fort Worth or Houston.

Today First National exceeds Republic in deposits (\$793-million to \$781-million), but has a smaller capital structure. First's deposits exceed by \$3-million the total for all Fort Worth banks. In Houston, it took a recent merger (forming First City National, with \$642-million deposits) to give that city a bank anywhere near the size of Dallas' big ones.

Of the two Dallas banks, First is the more conservative, carriage-trade type, and has run about 10% behind Republic in deposits out on loan. To get more drive, First in 1950 brought over from Republic Fred Florence's heir apparent, Ben H. Wooten, making him president. At Republic, Florence



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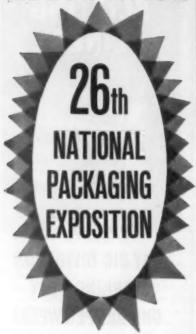
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MARKETS (this one is for women's apparel) are Dallas feature.

has now stepped up to executive committee chairman after 27 years as president.

• Typical—Equally prominent—though less as a banker than in many other functions—is the chairman of Dallas' third largest bank, Mercantile National's Robert L. Thornton, Sr. Now nearly 77, he is winding up his second two-year term as mayor, and has just announced his availability for the April election.

"Bob" Thornton's role typifies the Dallas business leader's civic service, which is traditional and all-pervading to an extent rare elsewhere. It goes back to the diligence of early businessmen in getting Dallas its railroads, big banks, and industries.

The modern era has been called the Thornton Era. Daily, you'll find him at a money-raising luncheon for such a project as buying \$1.5-million in debentures to bring in a Statler hotel, on a plane to Washington to testify before the Civil Aeronautics Board, on the phone to an Eastern industry contemplating a branch plant in the Southwest, or, as Bob Thornton, in the City Council. The mayor, who makes a fetish of recalling his cotton-picking days and speaking like a cotton picker, describes the spirit:

"We fight like hell with each other, but when it's for Dallas, it's 'line up, boys.'" His philosophy for a place like Dallas, without natural advantages: "You gotta build a city; the damn things don't grow like mushrooms."

• City Builders—It's for the job of

• City Builders—It's for the job of city building that Thornton provided the vehicle 20 years ago when he founded the Citizens Council.

That was in 1934, when Dallas' delegation to the state capital, for which he was spokeman, won the right to hold the 1936 Texas Centennial in Dallas. There was no reason for Dallas to get it—the city hadn't even been settled when Texas won independence. But Dallas offered the biggest guarantee, Dallas men put up the money, and Dallas got it.

This led Thornton to see the need

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for a group of 50 businessmen—"men who can say yes," so the Citizens Council got a state charter and became permanent Now it has 200 members, heads of the business concerns of Dallas, who can say "yes" with a check. Its prime movers are the board of directors of about 20. On the board, says one of them, "turnover is only by death."

• Politics—The council adamantly insists it takes no position in politics—but there are more than subtle connections with the Citizens Charter Assn., a nonpartisan group made up of the same businessmen It came to power in 1931 on a platform advocating the council-manager form of government, and has won all but two elections since.

The charter association becomes active only in election years (as now), but the Citizens Council is a perennial watchdog. That the charter association has given Dallas good government is attested by support of the electorate and absence of strong opposition.

The businessmen on the City Council exert themselves to keep their skirts clean so as not to stir up opposition. The council voted down one member who required a favorable decision for his own business. Another, on a rezoning matter, says, "They treated me rougher than they would any private citizen."

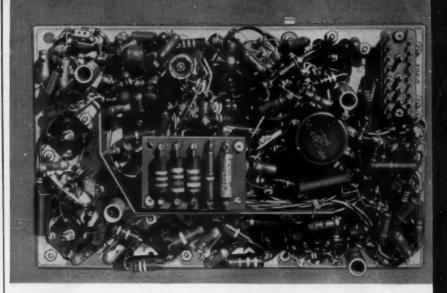
Labor is pretty quiet, and there's a top labor man on the City Council, so there's little opposition from that direction. Dallas is the center of open-shop sentiment in a noted open-shop state; and in aircraft and construction prosperity seems to have precluded much labor-management difference.

Still, in the years of business administration, diverse grievances have become pent up—such as expansion of the residence-surrounded airport, a log leash law, futile rain-making efforts. This year the Citizens Charter Assn. faces more serious opposition than in years. This and the failure to find a strong, new candidate had a lot to do with Thornton running again.

• Culture—Outside city government, the Citizens Council's role can't be exaggerated, either. It usually starts with the banks—in a fund raising, the first question is: "What's the clearing house going to give? When the Dallas Clearing House Assn. is committed to 5% or 10%, the rest come in.

This devotion is prominent in culture. Dallas is no New York or Boston when it comes to the muses, but it's ahead of any other city roundabout—not so much because the people of Dallas were born with good taste, but because a few born with it have extended its virtues to others. It became the thing to do. It also became good business.

How important culture is to business



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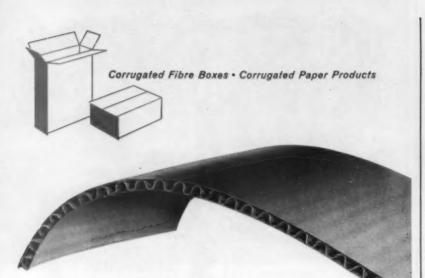
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DALLAS CLUB, now in new quarters, is one of several businessmen's clubs.

shows up in the fact that Stanley Marcus of Neiman-Marcus Co., specialty store, and Arthur L. Kramer, Jr., of A. Harris & Co., department store, are closely affiliated, respectively, with the Dallas Symphony and Metropolitan Opera

The Dallas business community's goget-it spirit came out when Kramer's late father, to get the Metropolitan Opera to stop in Dallas on its spring tours, committed the city to a certain guarantee even though his colleagues had fallen short of it. He wired home he had landed the Met, returned to Dallas, got the men together, and raised the sum needed.

Dallas men are so impressed with the importance of the Met to their city that the contract forbids the Met to give performances in Houston on weekends—and prevents it from stopping at all in Fort Worth.

III. Fort Worth's Champion

For years, Fort Worth's top executives have watched the performance of their opposites in Dallas. Says one, conceding envy: "Dallas has 20 men who run when the bell rings."

The difference was in the dominance of the late Amon Carter.

At Fort Worth, he was for two decades the one-man in a one-man town. He gave so generously of time, wealth, and civic enthusiasm to building the city that former V.-P. John Nance Garner once said: "That man wants the whole government of the U.S. to be run for the exclusive benefit of Fort Worth."

Carter, who became publisher of the Star-Telegram 17 years after joining it as advertising salesman, was a one-man Citizens Council. He got on the phone to bring in industrialists, flew to Washington to take advantage of his influence with both parties in getting help for Fort Worth. He had visitors to his Shady Oak Ranch, gave them 10-gallon hats. In short, he was Fort Worth.

Testifying to his success are industries, a football stadium, an auditorium



in factories



in clubs, hotels, fraternities



in stores, shopping centers



in banks, offices, S. & L. assn's

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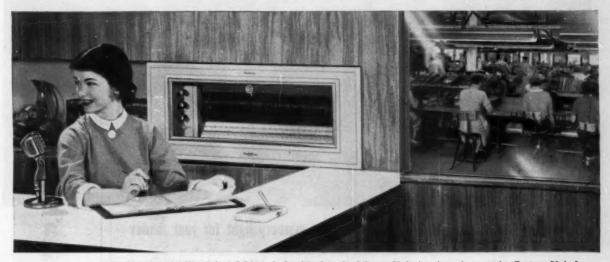
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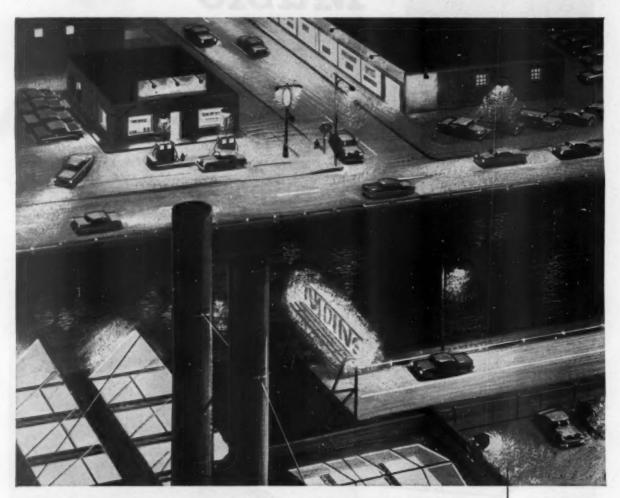
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RODEO is highlight for annual stock show held each winter at Fort Worth.

and Coliseum, many philanthropies. Obsessed with a spirit of competition with Dallas, he countered Dallas' Centennial by bringing down Billy Rose, producing his own Casa Manana, starring Paul Whiteman and Sally Rand.

Come to Fort Worth for entertainment; go elsewhere for education,'

he said.

· Airport Rivals-The bitterness of the rivalry was made manifest in airport disputes. Efforts to have the two cities build an airport midway between them met Fort Worth opposition until after World War II. Then the engineers picked the west (Fort Worth) side of the field as best spot for the terminal-and Dallas cried "conspiracy" between Carter and the Civil Aeronautics Administration. Fort Worth finally built the airport, after Dallas tried in Congress to spike the appropriation.

At first, Dallas businessmen wanted no part of what seemed like a personal feud, but later it became a face-saving

matter, and all joined in.

Meantime, Dallas decided to enlarge

its own Love Field.

Things simmered down until Dallas thought it saw another conspiracy: American Airlines was moving several popular flights to the new Fort Worth airport-flights that couldn't land at the old one-and American's largest stockholder was Amon Carter. The result was a new three-way feud (the two cities and American) before CAB. The upshot was that American restored some service to Dallas, and Fort Worth charges it's discriminated against.

· Gladiator-More moderate people in Dallas are glad the fight is over-though Mayor Thornton conceded that Carter "sure kept us on our toes."

"Amon," he says, "was a gladiator, but this same ambition produces a

weakness in city building."

With all tribute to Carter, Fort Worth leaders also recognized the disadvantage of not having a multi-headed business leadership. Men may have stood up to Carter, but none rose to take charge of anything while he lived. He wanted to do the work and have

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the credit, they say. There was no room for the others.

• Succession—Just before he died, a few senior executives began discussing the situation—not so much the immediate problem of who would take over when he died, as how to try out younger men for harness.

Now a group is talking over, in still loose terms, what kind of mechanism they want to use to mobilize business leadership. It includes such men as J. B. Thomas of Texas Electric Service, First National Bank's J. Lee Johnson, Jr., and Marvin Leonard of Leonard's department store among older executives, and publisher Amon Carter, Jr., and Fort Worth National Bank's Estil Vance among younger ones. All agree that young Carter has no ambition to step into his father's role.

They're not quite sure yet how they can use their influence at city hall, and aren't ready to offer a ticket this year. The group, smaller and less well-knit than in Dallas, once had a hand in running the city, but was defeated a few elections ago. Now at the helm is a "blue ribbon" committee headed by a dentist, Dr. F. E. (Jack) Garrison, as mayor. It's regarded as competent, unimaginative rule, and Garrison himself won't run again.

A striking feature in both Fort Worth and Dallas is the virtual absence from the business leadership of oilmen—the wealthy, ruggedly individualistic independents. One bluntly stated their philosophy: "I don't make my money in this town. I make it in West Texas or the Williston Basin or Canada."

IV. New Links to Grow On

In a way, it was ironic that Carter, Fort Worth's great protagonist, should die just at the time that moderating influences were on the rise in Dallas and expansion was bringing the two cities physically closer together. But you can't miss the signs that the old rivalry is dying down:

 A toll road between the two cities is nearing completion, making each more accessible to the other. Men in both cities had a hand in it.

 The federal interstate highway program will provide more highways for both, including loops of the downtown areas—and under state supervision the two must work together. State officials certainly wouldn't O.K., say, a route through Tarrant County that hit a dead end at the county line.

Government cooperation is important, since each city has 28 other incorporated communities in its county. The two mayors have already met with mayors of three suburbs lying between them—Arlington, Grand Prairie, and Irving—though this was mostly concerned with bringing some kind of



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order to a five-way annexation binge.

• On a business level there's the 5,000-acre industrial district being developed midway on the toll road by Great Southwest Corp. It represents an investment by real estate groups in both cities as well as Rockefeller Center, Inc., and Webb & Knapp, Inc.

• Ingrained—Of course, anything as deep as the Dallas-Fort Worth feud isn't forgotten overnight, and there's plenty of evidence that the really hard, dirt-moving kind of effort at cooperation

Both cities have had a water shortage, yet when it came to looking for long-term supplies they went on their own-Fort Worth to west and south, Dallas to parth and east. Eventually, it's in

to north and east. Eventually, it's inevitable that they will have to build joint water storage and transmission facilities.

On city planning, they have gone independent ways, too—but you get the impression all this is about to change, maybe this year.

Fort Worth went Dallas one better with its Gruen Plan (BW-Mar.17'56, p70) for a belt highway, pedestrial malls, fringe parking, and underground delivery systems-proposed by Victor Gruen and sponsored by Texas Electric Service's J. B. Thomas. Dallas maintains it has no need for such a plan. Thomas says it will not only help downtown Fort Worth compete with suburban shopping centers and Dallas, but will also give it something unique to attract scientists, engineers-and new industry.

• Growth to Come—Continuation of the postwar boom is uppermost in the minds of both cities. To talk of anything but growth has been tantamount to treason in Texas. However, Dallas housing starts—especially, apartments dropped 27% last year, bringing a reflective mood to the aggressive banks. But the postwar enthusiasm has been restrained only in the slightest degree.

Businessmen expect growth to continue, but perhaps at a slightly reduced rate. Though professedly undisturbed by manufacturing's dependence on defense plants, they admit they'd prefer diversification. That would mean more of what gives the cities their present feeling of well-being—trade, finance, services, some manufacturing, and an undercurrent of oil.

Accustomed to their role as market centers and sure to benefit from prosperity in their spheres of influence, the cities say they'd be quite happy to see new plants come to towns in their area—even outside their counties. Dallas' salesmen even say they won't begrudge Fort Worth an industry they might have had—largely because they hope the toll road will enable workers to live in one city and commute, or at least shop, in the other.



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Lines Are Drawn for Aid Battle

 Foreign aid program faces bitter clash between pressures of foreign policy and facts of domestic politics.

Issues that will shape Congress battle are foreshadowed in three foreign aid studies just released.

Vote is still many weeks off, but outlook now is for some cuts in President's \$4.4-billion request.

A clash between the demands of a dynamic foreign policy and the realities of domestic politics threatens to kindle a fierce debate over the Administration's foreign aid program.

This program doesn't come up for a Congressional vote for some weeks yet. But you can get a good idea of the main issues in the debate from three major studies of foreign aid that have just been released in Washington.

• The President's Citizen Advisers Committee, headed by Benjamin F. Fairless of U.S. Steel Corp., this week reported the results of its six months' study of the foreign aid program. The committee endorses the idea of continuing foreign aid at present levels indefinitely. But its report opposes a bigger aid effort-and qualifies the endorsement of the current program sufficiently to give ammunition to Congressional opponents of foreign aid spending.

· A study of the aid program commissioned by the Senate Foreign Relations Committee takes a radically different approach. This study, prepared by the Center for International Studies of the Massachusetts Institute of Technology, urges a greatly expanded longrange development program for under-

developed countries.

• Another Senate-commissioned study, by the American Enterprise Assn., recommends, on the other hand, that the main reliance be placed upon U.S. private investment abroad, and that government aid programs be geared primarily to promoting private invest-

• Impetus-The Administration has more to worry about, as it completes work on the fiscal 1958 aid program,

than this clash of opinion.

Pres. Eisenhower firmly believes that foreign aid must become the main weapon of U.S. foreign policy. In his inaugural address and in other statements, he has made it clear that he considers continued large-scale aid programs to be the essential price of peace. Then you have the fact that many

of his officials believe the need for aid is increasing rather than falling off-particularly in the Middle East, where primary responsibility for maintaining peace now falls on the U.S. (page 25). New aid programs are being drafted for Morocco, Tunisia, the new Gold Coast nation of Ghana, and other African countries, and Washington hopes to use economic aid as a lever to loosen Moscow's hold on Poland and possibly other Eastern European satellites.

Finally, the Administration is under pressure to assume a larger share of the

NATO defense effort.

· Opposition-Contrast this with the diminishing support for foreign aid in Congress. There, hostility to foreign aid is running higher than at any time since World War II. Many internationalist-minded Democrats who traditionally have fought for foreign aid are at swords' points with Secv. of State Dulles over Middle East policy. And they are critical of aid to the Arab nations. Conservative Republicans and Southern Democrats are opposing aid more strongly than ever.

I. Support With Reservations

Congress as a whole is alarmed by Eisenhower's record peacetime budget, and many congressmen feel foreign aid is the easiest item to cut, politically.

The Fairless committee totes up this

price tag for the aid program: for all U.S. collective security programs abroad, \$7.9-billion in fiscal 1956 and about the same in this fiscal year. Though the committee recommends maintaining that level, it insists that it should be a ceiling. And Fairless himself has indicated that he wouldn't mind seeing Congress try to cut it.

Of the total foreign spending, \$4.6billion came under the aid program proper. Another \$1-billion came from loans by the Export-Import Bank, or was generated by the farm surplus disposal program. The remaining \$2.3billion was made up of government

expenditures abroad, largely for maintaining troops overseas. The \$5.6-billion of direct U.S. assistance to foreign countries equaled 1.4% of the gross national product, as compared with 2.3% for U.S. aid in 1949. (The present Soviet aid program takes an estimated 1% of Soviet GNP.)

· Proposals-From Eisenhower's angle, perhaps the most useful part of the report concerns the problem of administrative freedom. Fairless endorses the Administration's long-standing request for more discretion in administering aid, for the authority to make longer-term commitments. The committee proposes that Congress appropriate aid funds only once every two years, or once in the life of each Congress, instead of once a year as at present. It also urges greater freedom of action both for the Administration in Washington and for aid officials overseas.

Beyond these recommendations the Fairless group has some other positive suggestions. It strongly supports further lowering of U.S. barriers to foreign imports and backs U.S. encouragement for regional economic integration not only in Europe, but in Latin America and Asia as well.

On the critical side, the report recommends a halt to making "soft" loans under the surplus disposal program and urges that grant aid be held to the absolute minimum. The committee opposes expanding aid spending through the United Nations, and insists that our military allies abroad should have priority in receiving aid over neutral countries that refuse to stand up and be counted on our side in the cold war.

The chief emphasis of the report, in fact, is on the importance of continuing to build military strength in the Free

World.

II. Divergent Views

The MIT study, directed by Prof. Max F. Millikan, takes as its starting point the contention that containment of Communism, while essential, is not enough. Millikan divides the Communist threat since World War II into three phases:

· First, Moscow hoped that it could Communize Western Europe by exploiting the postwar economic suffering and loss of confidence there, and also the overwhelming Russian military superiority created by rapid Allied de-

· Then the Russians hoped that the U.S. might fall so far behind in the

Rockwell Report



by W. F. ROCKWELL, JR.

President

Rockwell Manufacturing Company

PROBABLY it was World War II, more than anything else, which stimulated the great wave of diversification which has swept through U. S. business in recent years. By forcing companies into fields new to them, the war broke corporate

traditions of long standing. At the same time it dramatized the wisdom of not having all your eggs in one basket.

Of course we believe there is much good in this; healthy diversification has always been basic to our company policy.

But there is also danger in it, if diversification, decentralization, and expansion are attempted too rapidly, too ambitiously, or in the wrong directions. This can lead to a corporate ailment, fairly prevalent today, which might be called "industrial indigestion." It is an uncomfortable condition which results from having taken in more than management can digest. The effect on profits is always unhealthy; recovery is always expensive, and sometimes impossible. There have been a number of published accounts recently about companies going through the painful process of pruning off acquisitions and otherwise reshaping the corporate body.

Avoiding "industrial indigestion" is one of our major concerns in evaluating the very large number of companies brought to our attention each year as possible acquisitions. Before we seriously consider any company, we ask ourselves these two basic questions:

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Early this year our Power Tool Division published what we believe to be the largest single advertisement ever to appear on drill presses in a metalworking publication. The purpose of the twelve page ad was to dramatize the completeness of the Delta Drill Press line, and its almost limitless applications. Evidences of interest to date have been very gratifying, from both small and large plants where there is a growing trend toward the use of versatile power tools to supplement, and often replace, heavy, expensive single-purpose machines.

One of a series of informal reports on the operations and growth of the

ROCKWELL MANUFACTURING COMPANY



for its customers, suppliers, employees, stockholders and other friends

"... containment of Communism, while essential, is not enough ..."

STORY starts on p. 123

arms race that Russia could knock us out at one blow, or scare us into appeasement while they expanded their

 Now, the Russian leaders' last best hope is that they may be able to gain control, by non-military means; of the vast political and economic revolution sweeping the underdeveloped countries.

The containment policy and its instruments—the Marshall Plan, the U.S. military buildup, and the mutual security program for strengthening our allies militarily—has blocked the first two hopes at least temporarily. But Millikan insists that the U.S. and the Free World still haven't developed an effective answer to the very real third Russian threat.

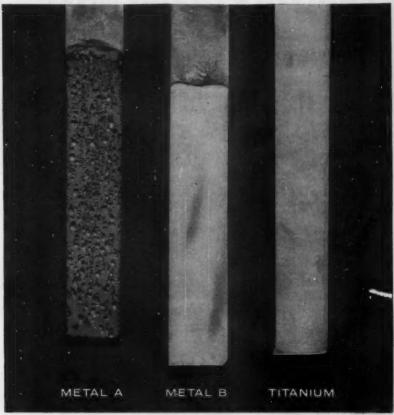
• Long-Range—He recommends a "long-range" (meaning at least a 10-year and preferably a 30-year) economic development program for the underdeveloped uncommitted nations. At a minimum this should make available from all sources (although the U.S. would be the main one) at least \$2.5-billion to \$3.5-billion worth of development capital a year over and above what is now being provided. The program should be budgeted and administered separately from other politically and should have no short-term political strings attached.

Such a program, says the MIT study, would offer a real hope of diverting the energies of the underdeveloped peoples from fanatical nationalism and Communistic experimentation into constructive economic development. In two to three decades you would have a number of countries in the underdeveloped areas of the world that would be economically self-sustaining, and also politically mature enough to solve their internal problems without resort to authoritarian political methods.

• Case of Egypt—Egypt is cited as a case in point. The MIT report argues that if at the time of the Army coup against King Farouk, the U.S. had offered seriously to help General Naguib tackle Egypt's overwhelming economic problems, Egypt would be a model for the Middle East by now. By failing to make significant economic development possible, the contention is, Washington pushed Nasser to the fore and then helped push him into extreme nationalistic adventures and increasingly intimate flirtation with Moscow.

• U.S. Interest-Promoting generalized

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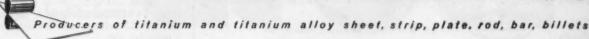
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economic development as a basis for political evolution toward democracy would be in the long-term U.S. economic and political interest even if the Communist threat didn't exist, Millikan thinks. But given the existence of that threat, it offers the best hope of shutting off the Russians' last promising avenue for expansion. That, he believes, would eventually force them to negotiate seriously on disarmament and the settlement of major political conflicts, such as the division of Germany.

• Private Investment—The American Enterprise Assn. insists in its report to the Senate that the only efficient way to get economic development in backward countries is through expanded U.S. private investment. It urges that the objective of all U.S. government aid programs should be to promote private investment abroad. On this point, it echoes a long section of the Fairless report, which calls for greater government encouragement for private investment as the best means of spurring economic development.

III. How They Line Up

The starting line-up behind these conflicting views of foreign aid policy shapes up about like this:

· Though Eisenhower seems to lean toward a crusading economic development program of the Millikan type, he also is worried about the increasing volume of federal spending. It is not clear whether he has fully recognized the probable cost of such an ambitious effort. It is clear that many of his official entourage-and notably Secy. of the Treasury George M. Humphrey-are against increased outlays for foreign aid. So the Administration is unlikely to push very hard this year for anything beyond the present aid program. But as the pressures for more aid in crisis areas of the world mount. the President may be forced to take a stronger stand.

• In Congress, an important group of liberal Northern Democrats sympathize with Millikan's views. But they will be heavily outnumbered by conservatives—both on the Republican side of the aisle, led by Senate Minority Leader William F. Knowland, and from the increasingly stubborn bloe of Southern Democrats headed by Sen. Richard B. Russell of Georgia. The cause of foreign aid also is hurt by the retirement of Democratic Sen. Walter F. George of Georgia, who in the past used his great influence to whip his party into line behind major foreign policy programs.

The outlook, at this stage, is for a bitter fight, and some cuts in the President's \$4.4-billion aid request, particularly on the military side where there is more fat. END

126 Business Abroad

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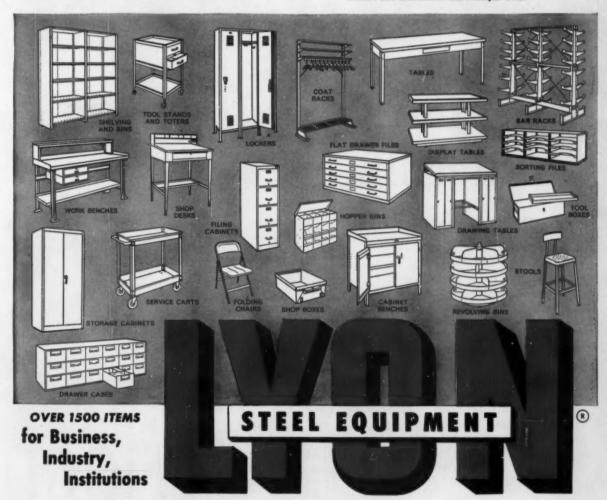
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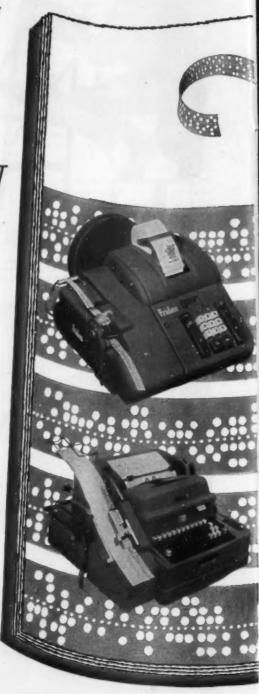
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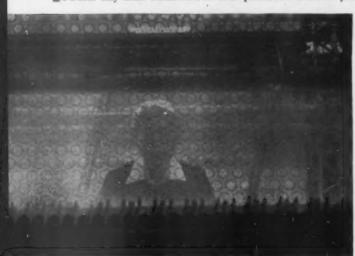


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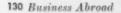


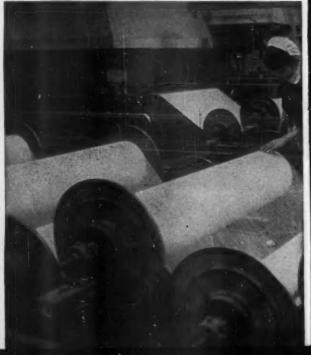
QUOTAS may mean curtailment of some production of cotton yarn (above) by Toyobo, Japan's largest textile manufacturing company.



EMBROIDERY is example of products requiring lots of labor that Japan sells to advantage in U.S. Quotas will hit these products hard.

WOOL (right), along with rayon and silk, is important part of Toyobo output. Synthetics show greatest potential.





Japan's Textile Giant Finds Itself Fenced In

The limits now fixed on Japanese cotton textile exports to U.S. pose new problems for a company such as Toyobo.

AN UNEASY quiet has descended this month on the long-standing argument between the American textile industry and Japanese manufacturers (BW-Jan.26'57,p169). Now that Japanese government and industry have adopted a system of voluntary quotas on exports of cotton textiles to the U.S., most American mill owners are prepared to wait and see the results.

In Japan, mill owners—including one of the biggest textile manufacturers anywhere outside the U.S., giant Toyo Spinning Co. (Toyobo)—are also settling down to the new agreement. Says Toyobo Pres. Kojiro Abe: "Even though we don't think our exports to the U.S. are excessive, we felt obliged to agree to the restrictions. We consider U.S. friendship more important than the interests of one Japanese industry."

• Freeze-Under the accord, the Japanese agreed to export no more than 235-million sq. yd. annually to the U.S. over a five-year period. The total, including both yard goods and made-up products, is expected to stay the same for each of the five years, although individual product quotas can be negotiated as the market changes.

The U.S. quotas won't hit Toyobo as hard as many Japanese manufacturers. Most of its \$136-million in 1956

sales consisted of products made up by other Japanese companies and then exported. But the effect will come indirectly when these Japanese customers trim their sails. The problem isn't just Toyobo's—or even just that of Japan's textile industry.

Textiles are the backbone of Japan's industry. The nation's total textile exports in 1956 were worth \$847-million. The U.S. share was \$190.6-million, or about 32% of total Japanese exports to this country.

 Alternatives—Now, U.S. imports of gingham and velveteens are frozen at present levels, and Japanese textile companies will be looking elsewhere for ways to stay healthy. Toyobo already seems to have some answers:

• Diversification of products shipped to U.S. markets can help some, according to Toyobo's Pres. Abe. But since Japan's major advantage over U.S. textile makers is cheaper labor, the Japanese can compete most effectively only with products into which a lot of labor goes.

• Overseas expansion is another hope. Toyobo has set up a 55,000-spindle cotton mill in Sao Paulo, Brazil, and a joint operation in Ceylon.

But Toyobo-and the Japanese government-seem to see salvation in syn-



INSPECTOR of cotton cloth printing is one of 24,000 employees of the integrated operation—raw cotton to finished cloth.





WORKERS make Toyobo's own engravings for printing cloth. According to Western textile experts, company's workmanship and facilities—mostly rebuilt since war—rank with the best. Added to low wage costs, this explains its success in U.S. markets.

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Story starts on page 131

thetics, on which there are no U.S. quotas—and where other Asian competitors like India are not yet strong. Synthetics are contributing more and more of the company's profits. Expansion plans include a \$33-million integrated rayon plant—to produce 50 tons of staple yarn a day—and an acrylic fiber plant, projected by a subsidiary jointly owned with Sumitomo Chemical Industry. Both are scheduled for at least experimental production this year.

Toyobo's leadership in expanding synthetics fits with its 75-year tradition of setting the Japanese textile industry's pace. Yet, paradoxically, Toyobo isn't an adventurous company but a conservative organization run according to "systems," not inspired leadership.

I. Series of Firsts

However, it's true that Toyobo has been setting patterns ever since it was established in 1882—and became the first non-governmental Japanese textile company to use steam power and electric lights. Some of its feats:

• In 1890, with introduction of a weaving section, it became the first

integrated textile company.

 In 1891, with exports to China, it became the first Japanese textile company to move into foreign markets.

 In 1922, it brought cost accounting to the industry and became the first Japanese company to use automatic looms exclusively in its cotton mills.

• In 1931, it was the first in the industry to use air conditioning.

 Today, it's the first in Japan to set up facilities to use isotopes for synthetics research.

• Laissez-Faire—Since its earliest days as the Osaka Spinning Co., Toyobo has been the best example of the "Osaka spirit"—Japanese free enterprise. Many of the other Japanese textile companies were fed by the government during the industrialization of the Meiji period (1868-1912). But Toyobo (which acquired its present name through a 1914 merger of Osaka Spinning and Mie Spinning Co.) avoided government capital and interference.

That's why the U.S. occupation authorities didn't deal Toyobo the same treatment as the Zaibatsu companies, dismembered because of their relationship with Japanese militarists (BW-Aug.13'55,p62). Toyobo was owned by thousands of small stockholders, not by a single family or group.

• War Woes-World War II brought other disasters to Toyobo. For a decade before the war, it had been on top of the industry. It could lay claim to the title of the world's largest textile concerns-with 71 cotton, wool, and rayon plants; 1.7-million spindles, 23,000 looms, and 46 subsidiaries in Japan,



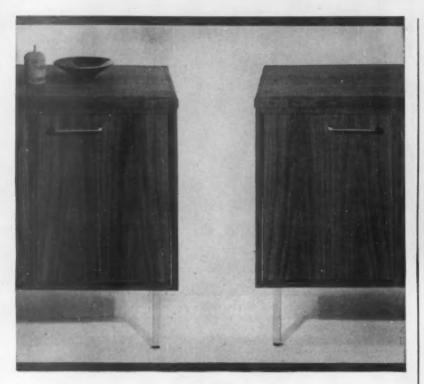
FRINGE BENEFITS for Toyobo employees, such as tea ceremony class, make up 40% of wages. Salaries begin at only \$13 a month.



FLOWERS and how to arrange them divert woman workers in free class. Benefits also include virtually free housing, meals, medical care, and insurance.

COOKING is another classroom subject. Many teenage girls, recruited from farm areas with labor surplus, find highest living standards they've ever known.





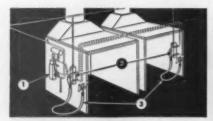
Can you tell which cabinet was finished by the hot-spray method?

Actual comparison quickly reveals the answer . . . for, the film build is greater with hot spray — especially on sharp edges. And the finish is smoother, richer, more uniform.

And your bookkeeper can tell the difference, too. Why the bookkeeper? Because the cost of application is far lower!

For one thing, with DeVilbiss hot spray, materials are applied at greatly reduced pressure, eliminating spray fog problems, and resulting in up to 50% savings in materials. It saves labor, too, by easing the job of hand rubbing. And finishes dry faster, shrink less, wear longer.

Cost- and quality-conscious manufacturers are quick to grasp the benefits, and install DeVilbiss hot-spray equipment. Why not do the same yourself—right way! The DeVilbiss Company, Toledo 1, Ohio. Branch offices in principal cities.



DeVilbiss hot-spray system is foolproof; adapts to multiple gun hook-ups. Hot water from master heater (1) heats paint in exchangers (2); heat-jacketed hose assemblies (3) keep point hot right up to guns, assuring uniform viscosity at all times.





PRESIDENT Abe, "extremely unhappy" about quotas, will still uphold them.

China, and Korea. In wartime, however, Japan's leaders turned more than 30 plants to war production. Bombings erased a dozen more, and an earthquake disrupted another. By August, 1945, only eight cotton mills, five woolen mills, and three rayon plants—about one fourth of prewar facilities—were operating.

Then the occupation officials declared Toyobo a restricted corporation because of its monopolistic character. It was divested of subsidiaries and required to clear all decisions with the government. Ironically, though, these restrictions helped build a stronger company, the present officers believe. It forced decentralization—for example, into cotton, wool, and rayon divisions. And that has improved Toyobo's competitive position in relationship to the other members of the Big Three in Japanese textiles: Kanegafuchi Spinning Co. and Dai Nippon Spinning Co.

II. Toyobo Today

The company now has 7,000 looms and about one third its prewar spindles. But it's still Japan's No. 1 producer of cotton goods, second in wool, sixth in rayon. Osaka is headquarters for 27 factories—14 cotton spinning mills, three cotton finishing plants, seven woolen mills, two rayon plants, and one rayon pulp mill. In the past seven years, the company has acquired 28 new subsidiaries and affiliates.

• Statistics—About 50% of Toyobo's entire production goes overseas—a lower proportion than before the war but still high, in view of domestic demand. Out of last year's \$136-million sales (a \$12-million gain over 1955), cotton accounted for \$78-million. And more than half the cotton went abroad—mostly in yarn for mills in Burna, In-

the clear window sells harder!

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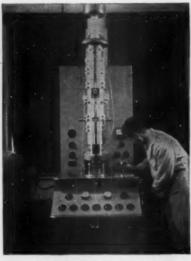
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RESEARCH into synthetics at Toyobo is applying U. S. discoveries about isotopes.

donesia, Pakistan, Hong Kong, and Argentina and in fabrics for the U.S., Indonesia, Australia, Burma, West Germany, and Britain. The most dramatic item of last year's business was a 100% increase in rayon exports.

Profits soared from 1955's \$4.9-million to \$12.3-million, despite heavy taxes (more than 50%, compared to a prewar 20%) and high Japanese interest rates on borrowed operating capital (making up 74% of total capitalization, compared with 58% before the war).

The U.S. took 20% of exported cotton fabrics, 80% of exported made-up cotton goods (mostly table damask), 60% of exported woolen yarn, and 27% of exported woolen fabrics.

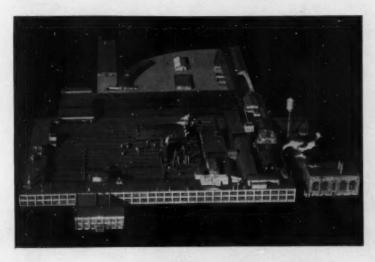
• Future—The new limits on exports to the U.S. will mean an industrywide surplus of several thousand spindles and looms. A cutback will probably come, and Toyobo will feel it. But the company is still going ahead with a program, now 80% completed, to streamline production. Toward that end, it has spent \$50-million since 1951.

Toyobo pins future hopes on its 26-vear-old Chemical Research Institute for Textiles. In its laboratories, 150 technicians are integrating their own research with technology purchased from U.S. companies since the war—Sanforizing from Cluett, Peabody & Co., the Everglaze process for resin finishes from Joseph Bancroft & Sons Co., and the Avcoset process for stabilizing rayons and viscose yarns from American Viscose Corp. Now the labs are also busy applying U.S. isotope research to Japanese synthetics. The government is urging Toyobo on, in the interests of reducing Japan's foreign exchange bill for the import of synthetic textile raw materials. END

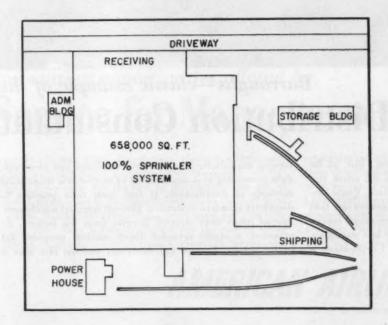
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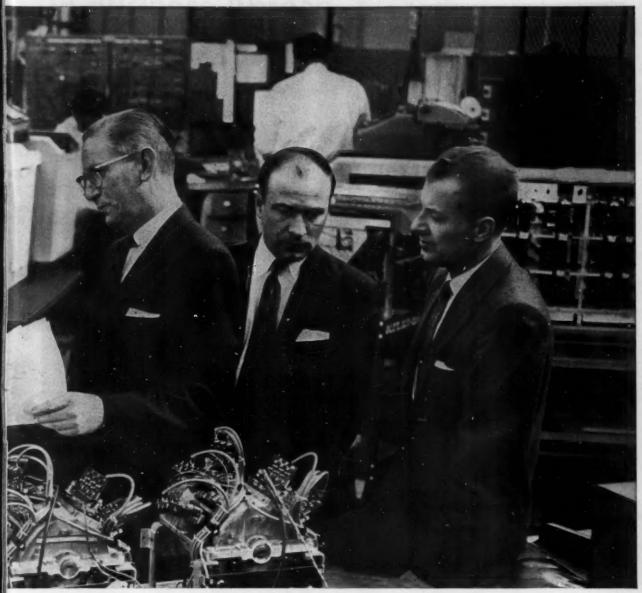


Burroughs-classic example of the

American's Distribution Consultant

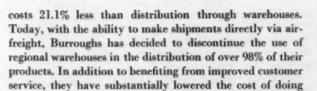
Airfreight means faster shipments, of course. But, of far greater significance to the manufacturer is the effect this speed has on the other phases of distribution. Quite frequently, a study of a product and its markets reveals that the application of air shipments can produce major economies in handling, finance, packing, inventory and warehousing. For example, in 1953, the Burroughs Corporation, a

leading manufacturer of business machines and electronic data processing systems, decided to re-evaluate its existing methods of distribution. It had been their practice to distribute standard equipment through regional warehouses. Special items were shipped directly from the factory. As expected, a study revealed direct method provided far better service. Unexpected, however, was the fact that it



cost-cutting opportunities offered by

Service for Management



business. American's Distribution Consultant Service was

established similarly to help interested managements analyze their distribution methods and determine the profitability of airfreight. If you would like to use American's Distribution Consultant Service to explore the potential advantages this modern form of transportation offers, write to: Mr. S. C. Dunlap, Vice President—Cargo, American Airlines, Inc., 100 Park Avenue, New York 17, New York.

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Look what happened to "old clutter top!"

Cluttered desks were believed incurable until the new manager moved in "Clutter-Proof" Desks

Cluttered desks are a sure sign of an old fashioned office-a carry over from the 20's. Today's modern offices have "clutter-proof" desks-the ingenious Shaw-Walker Desk that makes other desks obsolete.

With these new desks, time-wasting top clutter and drawer hodgepodge are eliminated. Fully 75% of things that drift around on top of other desks have a specific place inside this desk. There are off-

the-desk trays for incoming, outgoing and pending letters, off-thedesk space for work organizers, work separators, deferred projects, binders, books, pads, forms, card lists. There's even an in-drawer

wastebasket and provision for in-drawer phone!

With Shaw-Walker "Clutter-Proof" Desks, usable working space on the desk tops is doubled. And with everything so well organized inside the desks, more work gets done, easier, faster.

See these "clutter-proof" desks at our local branch store or dealer or write Shaw-Walker, Muskegon 37, Michigan, for "Picture Facts."



In Business Abroad

Ex-Im Bank Speeds Up Credit Program To Help Exporters Compete Overseas

The Export-Import Bank is streamlining its two-yearold credit program for exporters to help U.S. companies get quicker financing for overseas sales. Ex-Im's move stems from stepped-up international competition for new orders, which is forcing U.S. companies to close sales quickly—or lose out.

Among Ex-Im's procedural changes are:

 Consideration of loans to cover a sale that has already been completed.

Elimination of Ex-Im commission charge.
Use of a standard application form for loans.

 Reduction in the amount of credit information needed on foreign customers if the sale is less than \$50,000.

British Railways to Offer Passengers Live TV Show With Rolling Studio

U.S. railroads may get some revenue-boosting ideas from Britain's latest gimmick-TV entertainment for passengers.

All nine coaches on a special train will be equipped with 17-in. TV sets, one at each end of the car. That's not all: The scheme involves an entire closed-circuit TV setup, with a "caboose" studio coach—outfitted with dressing rooms, a commentator's desk, and a diesel generator for powering cameras and receivers—attached to the train. Britain's Pye, Ltd., is supplying the equipment.

The train carrying 600 passengers will make its trial run from Glasgow to London on Apr. 5. The British claim the TV-show-on-board will "attract new customers" and increase revenue. But how much it will cost the British Railways—and how performers aboard will keep from rockin' and rollin'—are two unanswered questions.

Big Batch of Hydro Power Projects To Give Brazil 2-Million Kw. More

Brazil is going on a power-development binge to keep its new industrial plants humming. In the next four years, the country hopes to have dams and power plants completed that will add about 2-million kw. to its present 2.9-million-kw. capacity. Among the projects:

The \$30-million Tres Marias dam on the Sao Francisco River in the state of Minas Gerais. The state power company has just awarded this contract to a combine made up of Kaiser Engineers, Morrison Knudsen, Utah Construction, and Raymond Concrete Pile.

The \$75-million Furnas dam on the Rio Grande River, which separates the states of Minas Gerais and Sao Paulo.

The Peixoto power project, run by American & Foreign Power, that's downriver from the proposed Furnas dam. The first two units of this will open next month. A \$95-million Ex-Im loan to complete the project is in the works.

The 10,000-kw. atomic power plant, for location across the bay at Rio de Janeiro, which A&FP plans to build as soon as the U.S.-Brazil bilateral agreement on atomic fuels has been worked out.

French Bankers Bring Offer of Loan In Drive for Latin American Markets

A delegation of French bankers arrived in Mexico City last week to talk loan with Antonio Bermudez, director of Pemex. The French were tossing around numbers like \$100-million to \$200-million for the Mexican government oil company. But informed sources in the Mexican capital thought Pemex was more likely to take something less than \$100-million.

The French, backed by their government, have been noising a loan for three years. Today's negotiations apparently arise out of Paris' new drive for Latin American markets—and its efforts to cut dependence on Middle Eastern oil. The loan would go for equipment to be purchased largely in the franc zone, although some U. S.-built equipment might be involved. Nobody was talking about it, but there was also the possibility that out of the new Pemex-French relations might come increased crude exports to France—which a stepped-up Pemex development program could produce (BW—Oct.20'56,p30).

Business Abroad Briefs

West Germany's exports to the U.S. were up 29% last year—to \$494-million from \$384-million in 1955. Imports from the U.S. increased 24%—from 1955's \$762-million to \$947-million.

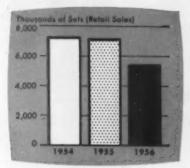
Plane facts: Egypt has O.K.'d regular Czech airline service between Prague and Cairo, and has begun negotiations with Russia's Aeroflot airline for Moscow-Cairo service. . . . Lebanon has refused to go along with the Arab League's nine-country ban on Air France's Middle East operations.

Openings overseas: Ralston Purina Co., which has Purina Chow plants under construction in Mexico and Colombia, has just bought a Venezuelan feed company. . . . Aluminum Co. of America has big plans for Surinam (formerly Dutch Guiana): assistance in developing a major hydro project and construction of a \$45-million aluminum-producing plant, South America's first. . . . Reynolds Metals Co. will build an aluminum-foil mill in Australia, with expansion into other aluminum product lines possible at a later date.

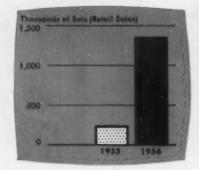
Denationalization of Britain's steel industry moved a big step forward this week when the Steel Co. of Wales, Britain's largest, sold \$112-million worth of shares. That reduces the government's steel holdings to less than half of the industry's total assets.

MARKETING

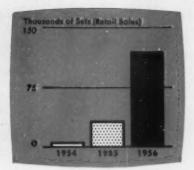
TV Set Sales



Regular black and white sets slump...



... as cheaper portables take bigger share ...



... and color still lags behind

Data: Frank W. Mansfield Statistical Director, Radio-Electronics-Television Manufacturers Assn.

So Where Can the Profits Grow?

After last year's shake-out of inventories—and whole companies—TV set makers look for a stronger 1957.
But they must reverse the downtrend in average dollar sale.

Big sales of portables helped to depress the average last year. Color sets are the major hope for upgrading this average, but some makers are still skeptical about when.

WHETHER the TV set manufacturer looks back or ahead, he sees jagged lines on his screen—and most of the lines point down.

The chart above shows what ails the industry. In a sentence, it's this: Last year the industry sold fewer TV sets than in 1955, and it sold them for less money.

Retail sales of all types, including color receivers, dropped from a record 7,465,000 sets in 1955 to 6,920,000 last year. Dollar volume dropped from \$1.745-billion in 1955 to \$1.368-billion last year. With less money flowing in from sales, the industry had less margin for profit. And it wound up the year with a disturbing number of unsold sets in the distribution pipeline.

in the distribution pipeline.

• Unit Sale Down-Most worrisome of all, the average TV set sale last year was down to \$190 from the \$225 level of the year before. Three reasons are advanced for this decline:

 The spectacular sales growth of the lower-priced portable TV sets, at the expense of conventional console and table models.

· The dumping of inventories by

companies that were going out of the TV set business.

 Other heavy inventories that led to severe price-cutting.

Meanwhile, there weren't enough sales of color TV sets to offset the downtrend in the average selling price. If the higher-priced black and white sets continue to lose out to the portables, it may be a long time before color makes its weight felt.

Most industry spokesmen, however, are cautiously hopeful about 1957. They are talking about a solid base of sales, improvement in profits (perhaps through price increases), and a clearing of the conditions that so disturbed the industry last year.

I. Popular Portables

Almost everyone in the trade agrees that the portable TV sets brought sales life to the business. But most go on to blame them for upsetting the market for the established lines of consoles and table models.

Portables weren't much of a market factor until General Electric Co. introduced its line of 14-in. screen portables in May, 1955. Up to then, portables were confined to the much smaller screens that people felt they had long outgrown. GE's 14-in. portables were a howling success, with some 250,000 sales in the first year.

GE's Pres. Ralph J. Cordiner attributed much of the company's TV sales gain to "the discovery that the consumer profess small sets."

• A Cheaper Substitute—Large-screenportables opened a new market among people who like to move TV sets around their homes or take them on trips. Then, too, the screen was now big enough so a portable could serve as a family's second set—or, more ominously, as its only set.

That's where the portables compete with the conventional sets. The buyer compares the 14-in. or, more probably nowadays, the 17-in. portable with the 17-in. or 21-in. standard table model. He looks at the price difference and he settles for the portable model—until color comes down to his price level.

No one in the TV set business objects to selling the portables as extra sets, but it hurts when they take the place of standard, more expensive sets. The portables are less profitable, add less to the industry's dollar volume. And their competition tends to depress the selling price of the conventional sets, further cutting dollar volume and profit margin.

• Half a Market—This downgrading didn't matter so much when only 250,-000 portable sets were being produced



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probably want us to do the next one. Other customers have found it so - 90% of our volume comes from old customers and repeat orders, especially in the building business, are the best indications of customer satisfaction. The roster of C/L customers is available, of course.

"If you are going to build" is the import of a C/L back that should be in your files — if you are. It shows some of the other C/L "tricks of the trade" used to increase valve, speed up work and cut costs. Although it is written for the laymon you will find its 58 pages dull reading if you are not really interested in keeping posted on building-engineering and construction methods. Request it on your letterhead or business card, please. It will be seat by mail — not delivered.

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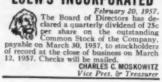
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in 1955, but the portables made their influence felt last year with about 1.5million sets produced. That was about 22% of production.

Today, portables account for around 30% of all TV set production, and most experts think they will make up at least 35% of 1957 output. You'll find guesses that portables will grow to 40% or even 50% of the market.

Screens in the portables are getting bigger, with emphasis this year on the 17-in. size. One development to keep the portables portable despite their big screens is the 110-degree tube that's being pushed by Sylvania Electric Products, Inc. It permits a shorter fore-and-aft dimension in the cabinet.

"The portable set is here to stay," says James M. Skinner, Jr., president of

Philco Corp.

II. Big, Bad 1956

Although over-all unit sales last year suffer only in comparison with the record set in 1955, the drop in average selling price was a sign of trouble. Sevcral companies went out of the TV set business altogether, and earnings were cut for many others.

· Casualty List-Among the important TV makers who showed up in the necrology for the year were these:

In January, Sparton Corp.'s TV business was bought by Magnavox &

In March, Magnavox bought Sentinel Radio Corp.

In April, Stromberg-Carlson Div. of General Dynamics Corp. quit making

In May, Admiral Corp. absorbed

Raytheon Mfg. Co.'s TV-Radio Div. In July, CBS-Columbia ended operations and Bendix Radio (Bendix Aviation Corp.) dropped its TV line.

In November, the Crosley and Bendix divisions of Avco Mfg. Corp. ceased operations.

This list of casualties led some industry spokesmen to predict that the TV set-making business will ultimately be in the hands of a few strong manufacturers.

· Earnings-Most companies suffered slashes in profits last year. RCA's cut in earnings was partly due, according to Chmn. David Sarnoff, to "the lower prices at which black and white TV sets and tubes were sold in a highly competitive market." Pres. Benjamin Abrams of Emerson Radio & Phonograph Corp. said the fiscal year was 'his firm's worst in 30 years.'

Most companies look for a better record in 1957, now that the shake-out seems to be easing. Major companies are even talking about increasing prices. Competition remains stiff, though. Westinghouse Electric Corp. has just recognized its consumer products dis-

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Everybody benefits when highway location allows adequate space for new industrial development between railroads and public roads. The highway is a major artery, usually difficult or impossible to cross with spur trackage.

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Constantly doing things - better!

tribution to improve its market position in TV sets and major appliances.

• Hopeful—The industry entered the year with heavy inventories—an estimated 2.5-million sets—but so far there hasn't been much, if any, dumping of inventories. Martin F. Bennett, RCA vice-president for merchandising, sees this as a sign of the industry's desire for stability. With growing talk of price increases, too, companies with heavy inventories don't want to take losses at this time.

In the first seven weeks of the year, about 625,000 sets were sold at retail—about the same as in the 1956 period. However, retailers took these sets mostly out of their own inventories. They bought about 25% fewer units from distributors.

Manufacturers have trimmed production in several cases to avoid adding to the glut of the market.

Another encouraging sign is the growth of a replacement market this year. Frank W. Mansfield, statistical director for the Radio-Electronics-TV Manufacturers Assn., estimates a minimum replacement market of at least 2.4-million sets this year.

III. Waiting for Color

To some, the greatest hope for the industry would be to upgrade the average sale. Leonard C. Truesdell, Zenith Radio Corp. vice-president for sales, urged members of the National Appliance & Radio-TV Dealers Assn. to put pressure on manufacturers to turn out more high-priced sets. The public will buy these sets if they are properly promoted, he declared.

Of course, color could give the greatest new impetus to more profitable sales. But there's a difference of opinion about how effective it can be

• Color Pioneering—Last year, RCA took a \$6.9-million loss in its effort to put color TV across. Some members of the industry don't appreciate this effort. They say no amount of cajoling by RCA will force the public to accept color at today's prices so long as they have adequate monochrome. RCA retorts that much of the industry is letting it do the pioneering work and will jump in eventually to reap the benefits.

"This year is the year for color," says Bennett of RCA. He figures that color is over the hump when 500,000 color sets are in use. RCA predicts it will sell 250,000 sets this year (the industry sold 120,000 in 1956), and Ross D. Siragusa of Admiral Corp. predicts industry sales will hit 500,000. Both RCA and Admiral have raised prices on some color sets.

However, a majority of the makers insists that the public won't fully accept color before 1960. END

SPECIAL STUDY
"Look where a site
is production-right"
ON REQUEST FROM
B&O RAILROAD
BALTIMORE 1, MD.





Speed Graphic photos record the inspection of crude drug raw material in the Merck Sharp & Dohme plant.



The inoculation of eggs—a vital step in the production of vaccine—is recorded with a Speed Graphic in the Merck Sharp & Dohme laboratory.

70th Anniversary-1887-1957

Graflex-made cameras can cut your costs, too. Write on your business letterhead to Dept. BW-9, Graflex, Inc., Rochester 8, N. Y. for free brochure on money-saving uses of Graflex cameras in industry.

Merck Sharp & Dohme is famous as a manufacturer of pharmaceuticals, biologicals, hormones and vitamins. It keeps its public and the medical profession informed about itself and its products by relying heavily on photography. To supply an abundance of pictures at minimum cost, Merck Sharp & Dohme maintains its own photographic department equipped with 4×5 Pacemaker Speed Graphics and a 4×5 Graphic View camera for studio werk.

F. Kerek Shecktor, Manager of Merck Sharp & Dohme's photographic department, estimates that picture costs were cut in half by establishing its own in-plant photo facilities. Says Mr. Shecktor: "Both the variety and amount of work we do are great and we must have versatile camera equipment that stands the gaff of heavy and repeated usage under all sorts of working conditions. Our maintenance records on our

Speed Graphic and Graphic View cameras have been extremely good and we have spent negligible money for repairs or maintenance. In fact, our Graphic View camera has not needed repair for six years except for its annual check-up visit to the mechanic."





Artist Alberto Ruiz . . .



. . . dashes off a painting . . .



. . . of a Flamenco dancer . . .



... in a short time to prove ... skilled hands are fast.

Guaranteed Genuine Oils by the Carload

By signing up a staff of fast-working skilled artists, Martin Lowitz (right) keeps well supplied with a controlled variety of paintings that can be sold at low prices to wholesale markets.

THE MAN surrounded by the original oil paintings in the picture (top right) is Martin Lowitz, 61, Germanborn entrepreneur of art for the wholesale market.

Since World War II, he has created a thriving business mass marketing original works in oil made to his order by a stable of 40 to 50 artists scattered around the world. Here are some statistics on Lowitz's art business:

Daily production: about 400
mintings

• Average price per painting (including frame): \$50 to \$60.

Normal sale: a hundred paintings or more.

• Inventory: 30,000 paintings in Lowitz's Beverly Hills vault.

• Biggest single sale: \$78,000 for 1,300 pictures bought by the Tropicana Hotel in Las Vegas.

Lowitz got his start in 1947 when a venture to sell modern California landscapes through a supermarket flopped, but left him with the conviction that a mass production of original art work sold cheaply enough was still a good idea if he could find a market. That year the Thunderbird Hotel, a Las Vegas luxury hotel on the Strip, agreed

to take several hundred of Lowitz's oils.

• Institutional Buyers—Today Lowitz's customers include hotels, motels, office buildings, restaurants and, more recently, public buildings and schools. He thinks he has hit the jackpot because institutional customers want to add touches of luxury—and original oils help create that impression.

This week, for instance, Lowitz was preparing to ship 300 of his stock of original oils to the Bismarck Hotel in Chicago. This is the first batch of 1,400 that hotel decorator Muriel Francis will use in a remodeling job. Total price: \$28,000 to \$32,000.

Speed and Skill—What makes it possible for Lowitz to serve this mass market for original art work is his organization of painters in all parts of the world.

Speed is the key to the low prices Lowitz puts on each batch of paintings. This, he insists, doesn't mean a sacrifice

"The good painters," says Lowitz, "are always fast." To make his point, he had Alberto Ruiz, official artist for the Mexico City bull ring, dash off one large painting of a Flamenco dancer in about 25 minutes (pictures at left) and





ONE DAY'S PRODUCTION amounts to about 400 paintings and includes a variety of subjects, colors, and sizes.



BULK SALES are arranged through such groups as home furnishings stores. Here, Barker Bros. executives inspect Lowitz's paintings.



FEDERAL COMPANY, INC.

NATIONAL FOLDING BOX MORRIS PAPER MILLS

BALES OPPICES: NEW YORK, M. Y.; CHICAGO, ILL., NEW MAYEN AND VERSAILLES, CORM., BOGOTA, M. J.; GOSTON AND PALMER, MASS., CLEVELAND AND STEUBENVILLE, OHIO, PHILADELPHIA AND PITTSBURGH, PA.; MARION, IRD.

FOLDING BOX PLANTS: BOGOTA, N. J., NEW MAYEN AND YERSAILLES, CONN., PALMER, MASS., STEUBENVILLE.
OHIO, PITTSBURGN, PA., MORRIS, ILL., MARION, IND. PAPER BOARD WILLS. BOGOTA, N. J. NEW MAYEN,
MONTYILLE AND YERSAILLES CONN., MORRIS, ILL., READING, PA., STEUBENVILLE, OHIO, WHITE HALL, MD.

another one of a bull fighter in 22 minutes.

Lowitz insists good artists who work every day acquire a speed and skill, just like a surgeon who operates every day. Lowitz sees to it that his artists are kept busy.

His stable of painters—he refuses to classify them as commercial artists—earn anywhere from \$6,500 to \$18,000 a year. Some of them work at something else. And some pursue a purer torm of art, seeking to have their work shown in regular galleries—usually under another name for fear that crities would pounce on them if it became known they were under contract to Lowitz.

 Production Control—Production is carefully programed by Lowitz. Each has a specialty—still life, say—and mostly he is commissioned to turn out variations of this one type of painting day after day. Lowitz tells his painters exactly what sizes and shapes he wants, and supplies them with a special composition board.

The paintings are shipped to Lowitz who maintains a steady inventory for customers that drop in. New Year's Day, for instance, a London art dealer cleaned Lowitz out of the paintings that were framed and ready to go.

 Wholesale Only—Lowitz sells only in wholesale lots of a hundred or more through architects, decorators, and home furnishings stores such as W. & J. Sloane in New York and Barker Bros. in Los Angeles.

He offers a variety of sizes and shapes, but they are standardized primarily to help production in the frame department. When the pictures are bought, it is a simple matter to pop them into frames that the customer selects. Lowitz turns out the frames on an assembly-line basis.

This makes it simple to close a deal. For instance, Homer A. Rissman, an architect for the new 158-room motor-hotel, the Hacienda, in Bakersfield, Calif., huddled with Lowitz over blue-prints and color schemes. Lowitz and his staff made a preliminary selection from his inventory and Rissman made the final choice from these. Altogether, the architect bought more than 700 paintings in a few hours.

Price, of course, is the main consideration when you're buying lots of 100 and more oils at a time.

• Is It Art?—But Lowitz insists his artists are good—as good as many of those who show in New York galleries.
"I can sell for \$125," he says, "some-

"I can sell for \$125," he says, "something that would go for \$1,750 in a New York exhibition."

Lowitz doesn't consider he is debasing art, though he knows that critics and artists frown on what he is doing. But he thinks that for the majority of his customers, his paintings are a big step into real art. END

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IN JUST 4 HOURS...I had 10 letter-size copies each of 97 different engineering drawings...all as sharp as originals

"I'm flying to Paris tomorrow. These 24"x36" drawings are too bulky to carry. I want ten 8½"x11" copies of each so all will fit in my briefcase. There are 97 drawings... and each must be as clear and sharp in detail as the original. I'll need them in the morning."

It was 2 P.M. and the president of a large manufacturing company was issuing a directive to the manager of

> Xerography copies anything written, printed, typed, or drawn
> Same, enlarged, or reduced size
> Copies onto

> > all kinds of masters paper, metal, spirit, translucent—for duplicating. Copies line and halftone subjects.

his Photographic and Reproduction Department.

Thanks to xerography, the dry, electrostatic copying process, the assignment was completed in 4 hours to the president's delight and amazement. Each 8½"x11" copy delineated every detail of the 24"x36" original drawing.

Unusual applications like this are possible only by xerography, the new dimension in paperwork duplicating. Xerography is a revolutionary copying development in this fast-moving age. Tasks that formerly required days or hours are now done in minutes and at a fraction of costs of other methods.

Even more spectacular are the day in and day out benefits of xerography. Multiple copies of an important management report, office form, engineering drawing, price list, etc., are made quickly and economically with masters prepared by xerography for offset duplicating.

Look to xerography for the solution of paperwork duplicating problems in all departments of your organization. The Haloid Co., 57-9X Haloid Street, Rochester 3, N. Y. Branch offices in principal U.S. cities and Toronto.

HALOID XEROX

You use only the UniTrane air

Individual Trane units may be shut off in unoccupied offices without upsetting the balance of the system

Here's big system air conditioning with built-in cost control! It's UniTrane air conditioning that cools in summer, heats in winter—provides clean, filtered air in every season of the year!

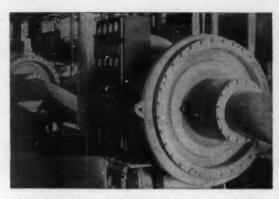
And this year-round comfort system is budget minded . . . permits each occupant to shut off the cooling in one or more offices without upsetting the balance of the system.

Whether you're cooling an entire skyscraper during the business day—or a single office after hours—the UniTrane system of air conditioning furnishes just the cooling you need . . . lets every occupant control his own climate. There's Trane equipment for any system, any building, any budget. In addition to the fan-coil Uni-Trane units described above, there are induction type UniTrane units for use where a high pressure induction system is desired. These units not only condition all the air, but filter it, too—another Trane exclusive feature.

So, for year 'round comfort . . . for air conditioning that holds down costs . . . make it UniTrane! Whether you're building—or planning air conditioning for your present building—have your architect or engineer consult your nearby Trane Sales Office, or write Trane, La Crosse, Wisconsin.



cooling you need with conditioning



Power saver! As the need for air conditioning varies, this Trank CenTraVac paces itself to supply just the amount of cooling needed—automatically. Use of power is in almost direct proportion to the cooling need. Hermetically scaled, the CenTraVac starts, stops, runs by itself... no full-time attendant is needed.

For any air condition, turn to

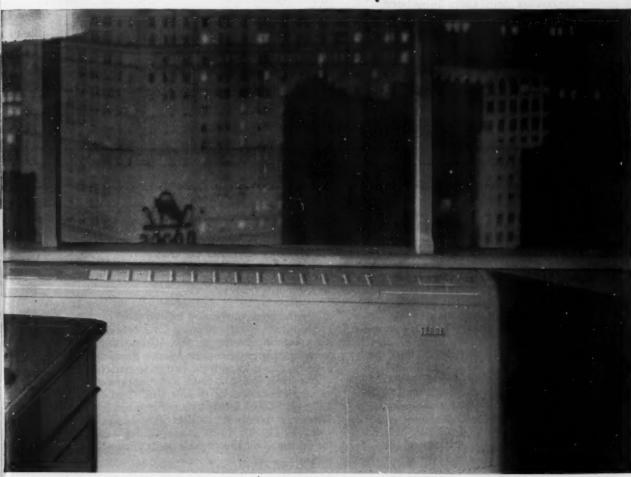
TRANE

MANUFACTURING ENGINEERS OF AIR CONDITIONING, HEATING, VENTILATING AND HEAT TRANSFER EQUIPMENT

The Trane Company, La Crosse, Wis. • Eastern Mfg. Div., Scranton, Pa. • Trane Company of Canada, Ltd., Toronto • 90 U.S. and 19 Canadian Offices

Dial the climate you want! UniTrane model illustrated is a fancoil unit. A finger-tip touch on the Climate Control dial gives each occupant the desired climate. Individual units may be shut off to save cooling. Available in free-standing, wall-hung or recessed models to simplify remodeling.





In Marketing

FTC Study of Misleading TV Ads Centers On Visual Deceptions

A bundle of complaints aimed at false and misleading advertising on television is moving through the legal machinery at the Federal Trade Commission. FTC's special radio-TV unit of five lawyers, set up last October to coordinate script-reading and monitoring of TV commercials in nine FTC field offices, says it has a number of

formal complaints almost ready for filing.

FTC has gone after "bait" advertising on both radio and TV before, and charges of using come-on types of advertising are sure to figure in the new cases. But the emphasis of the special unit has been on checking the visual deception possible only on TV: demonstrations in which a competing product is made to look not only inferior to the advertiser's product but either nonworkable or unfit for use at all.

Long Court Fight to Limit Quantity Discounts Still Gets Nowhere

After five years of litigation, the Federal Trade Commission is still making no headway in its first attempt to establish a rule limiting the size of discounts that can be

granted for quantity purchases.

Early in 1952-after years of prodding by small tire dealers-FTC set up a quantity limit rule for the tire industry. It fixed a 20,000-lb carload of replacement tires and tubes as the maximum discount unit for a single order; buyers of larger amounts could get no greater discount (BW-Jan.12'52,p126).

Last week, the U.S. Court of Appeals in Washington, D. C., threw the rule out the window, upholding a 1955

lower court decision.

The original FTC order created a great hue and cry. It was viewed as a precedent that FTC might apply to other industries, which could drastically alter pricing prac-

tices of many large buyers and sellers.

Actually, the rule never was in force. The major makers and buyers won an injunction delaying enforcement. Now if FTC wants to resurrect its ruling, the Supreme Court appears to be its only resort. The commission may well hesitate to try that route after its earlier court defeats. If it does, it may have to start from scratch, since the figures on which FTC based its order are nearly 10 years old.

In last week's decision, Judge Wilbur K. Miller, speaking for the three-man tribunal, did not pass on the merits of a quantity discount limitation or on FTC's right to regulate it-a right granted the commission under Robinson-Patman. Instead, the court found a basic discrepancy between the terms of FTC's order and the evidence on which the order was based. Discounts are figured on dollar volume per year. The commission found that only 63 dealers—out of 50,000—bought \$600,000 worth or more of tires a year. The discounts these few big buyers got added up to "unjustly discriminatory" prices, "promoting monopoly," FTC argued.

Yet FTC's ruling was stated in terms not of annual dollar purchases but of carload orders. Judge Miller said, "Obviously a finding concerning that [the scarcity of buyers of \$600,000 or more does not support a rule fixing a

quantity limit of one 20,000-lb. carload.

Company That Dropped "Fair Trade" Now Accused of Policing It Illegally

Even though Bell & Howell Co., Chicago manufacturer of cameras and camera equipment, dropped "fair trade" on Feb. 1, the Federal Trade Commission last week charged the company with using illegal methods to

police its fair trade contracts.

FTC says Bell & Howell's methods of enforcing these contracts are not permitted by state or federal law. Most states permitting fair trade provide for enforcement of the contracts through court injunctions. But, says FTC, Bell & Howell "fined" any of its 7,000 dealers who sold below the fair trade price. The fine was said to be an amount equal either to the dealer's profit on the sale or to the established dealer's discount.

Bell & Howell then, says FTC, paid this amount to any competing dealer who claimed that the below-fair-

trade price deprived him of a sale.

FTC also charges the company with illegally restraining trade by requiring its 178 "special representatives"who sell to institutional users-to compete only in specified territories, on penalty of paying Bell & Howell a fine on any sales made outside the allotted territories.

Bell & Howell answers that it does not "fine" an erring dealer, but makes an "equitable adjustment to the dealer who lost on a bid." B&H has no distributors, just regional dealers, who often bid against one another for institutional business. When one dealer gets the contract from an institution by going below the fair trade price. B&H asks that he turn over the profit to the dealer who

The company figures that the present suit is "ludicrous" since B&H is now out of fair trade.

How Many Grades of Gas For the 1957 Models?

Gasoline marketers continue to split on how best to satisfy the needs of the new high-powered cars.

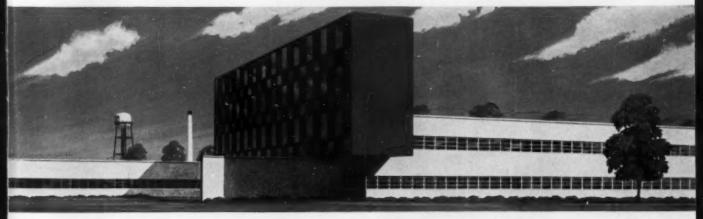
This week, Atlantic Refining Co.'s answer was a new, higher-octane premium gasoline, Atlantic Imperial. Since Imperial replaces the present Atlantic Premium, Atlantic Refining thus sides with the two-grade marketers.

Last week, Gulf Oil Corp. took the three-grade route with announcement of its new Gulf Crest (BW-Mar. 2'57,p49). Cities Service also not long ago followed the three-grade strategy set by Esso Standard Co. and Tidewater Oil Co. This week it was "seriously considering" the question-but hadn't made up its mind which way to jump.

Foresight by



Johnson & Johnson



Plant Site by





Johnson & Johnson's desire to build the world's largest, most modern plant for the manufacture of surgical dressings and baby products was transferred into prompt action when Pennsylvania Railroad located them at North Brunswick, New Jersey.

PRR quickly arranged property surveys and soil analyses, joined with local community groups to expedite construction and work out building code requirements. During construction, PRR rushed needed building supplies to the site via fast freight. The result

is this new plant strategically located along the PRR main line and U.S. Route 1.

PRR's vast experience in plant locating is offered to all industries . . . can help put your business in the area of its most outstanding growth potential.

All of this is supplementary to the Pennsylvania Railroad's prime purpose . . . to supply you with the finest direct line transportation in America's most densely populated and richest markets.

Plan your future in Pennsyland!



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Hammermill unlocks the secrets of hardwood . . . and you can see the difference in Hammermill Bond

Whether you're writing, typing, folding or reading, you'll get better performance from today's Hammermill Bond because of the new, exclusive Hammermill process which produces Neutracel* pulp. With Neutracel, Hammermill now unlocks for fine papers the special papermaking properties nature grows in northern hardwoods. Papermakers have tried to obtain these qualities for years. Now Hammermill has done it!

Neutracel's finer fibers blend with other quality pulps—knit all the fibers more closely—to give you a paper with more uniform formation. And—formation is a key quality in paper. Generally, the better the formation, the better the paper. Hold a sheet of new Hammermill Bond up to the light (or look at the photo at right) and you'll see the noticeably more uniform distribution of fibers.

Neutracel pulp also imparts a

smoother, more velvety surface so that new Hammermill Bond takes more readable writing, typing, printing and carbon copies. And, Neutracel's special properties lend greater bulk and opacity to Hammermill Bond—quality features that will give your letterheads and business forms better appearance plus the "heavy feel" that denotes quality paper.

With its exclusive Neutracel process, Hammermill has taken a \$6,000,000 step forward to bring you Hammermill Bond that 1) prints better—ask your printer; 2) types better—ask your secretary; 3) looks better—see for yourself! Ask your printer to show you samples or write on your business letterhead for a sample book of the new Hammermill Bond. Hammermill Paper Co., 1455 East Lake Road, Erie 6, Pennsylvania.



Printers everywhere use Hammermill Bond. Many display this shield.





with Neutracel's finer fibers, costs no more!

INTERNATIONAL OUTLOOK

BUSINESS WEEK MAR. 9, 1957



This week both the Middle East (page 23) and Africa assume a new importance in U.S. foreign policy.

In Washington, Congress put the stamp of approval on the Eisenhower Doctrine, thus making the U.S. primarily responsible for keeping the peace in the Middle East.

In Accra, Vice-Pres. Nixon represented the U.S. as Britain's Gold Coast colony became the Negro nation, Ghana.

Put the two events together and you can see (1) widening horizons for U. S. business and (2) growing U. S. responsibilities abroad, perhaps to the point where the Eisenhower Doctrine may have to be extended some day to cover all or most of Africa.

History is moving so fast in Africa that it is hard to predict our future role there. To a great extent it will depend on:

- Whether Britain and Western Europe can work together in evolving policies to bring off their new Eurafrica scheme in fairly short order.
- How much drive Moscow puts behind its plans for Communist subversion in Black Africa.

Then, our standing in Africa will depend to some extent on how successfully we deal with our own race problems in the next few years—and on whether we drop our neutrality toward South Africa's racial policy.

There is no doubt about Western Europe's intense interest in developing Africa's resources. You can see that in the support now being given to Eurafrica, the scheme to link the French and Belgian colonies to the sixnation Common Market.

Talk to German industrialists, for example, and they will tell you that Europe must maintain its position in Africa—to have an assured source of raw materials such as the U.S. has in Latin America.

The British are equally interested, and more firmly entrenched. They are showing the ability to move with the times, as Ghana's independence proves. The French, of course, are moving also in their Negro colonies, as are the Belgians in the Congo.

The big problem for Europe is to find the capital to do the job. Already, American capital is playing a big role in African development, especially in mining.

Ghana is bound to provide an inspiration for nationalist movements all through Black Africa—and thus open the way for Communist infiltration.

As native nationalism gains strength, Soviet agents will move in, try to turn this force against the West, as they did in the Middle East.

Schools for training Negro Communists were set up some time ago in Czechoslovakia. Now you can expect Moscow to offer plenty of technical assistance, plus at least small amounts of economic aid.

It looks as if India soon will be attracting a lot more private capital from the West. This week Air India borrowed \$11.2-million from five U.S. banks, with the World Bank participating to the tune of \$5.6-million of the longer maturities.

INTERNATIONAL OUTLOOK (Continued)

MAR. 9, 1957

This is the first Indian entry into the private U. S. money market. And it is regarded by international financial circles as setting a new trend. (A privately owned Indian industrial firm now is dickering for a sizable private loan in this country.)

The Indian government can be expected to encourage more direct investments by foreigners in India. The policy was set back in 1955 but has bogged down somewhat in the application of government regulations.

Behind India's interest in tapping private foreign capital is a growing feeling in New Delhi that it's absolutely essential if the country is to achieve the goals of the second Five Year Plan.

The Suez crisis is forcing a stretchout of the plan. It further widened the original gap between capital needs and funds available in India.

In Indonesia at midweek it looked as though the Communist Party had failed to muscle its way into power by backing Soekarno's plan for "guided democracy."

Last week's revolt in Eastern Indonesia (one of the richest areas of the archipelago) has strengthened the hand of former Vice-Pres. Hatta and other anti-Communists. The rebel leaders in East Indonesia, like the earlier rebels in Central Sumatra, are demanding that Soekarno (1) call Hatta back to the government and (2) keep the Communists out. In Java itself, the army chief of staff has told Soekarno that large segments of the military will oppose any Communist participation in the government.

So Soekarno seems to be facing this choice: Drop the Communists or risk civil war.

Any drift toward Communism or civil war in Indonesia would endanger the Administration's policy of championing the newly independent states in Asia and Africa. Also, it would strengthen the hand of those in Europe who want to hold onto the remaining colonial possession. And here in the U.S. it would supply ammunition for Congressional critics of foreign aid spending (page 123).

For years, Communist propaganda has taunted ice-cold Coca-Cola as bottled, "capitalist" poison. Now Poland—with its U.S. relations thawing out—has decided to make, bottle, and sell Coke. But that's only half the story:

Close checking in Warsaw shows the government has made no deal with the Coca-Cola Co. Main reason: Poland doesn't have dollars to pay for a licensing agreement.

Actually, a bottling plant in Lodz (near Warsaw)—after chemically analyzing Coke—plans to market a Polish version under a name such as Vitacola or Cocktail Cola. Another bottler in Stettin also has an imitation readied.

There's more to Poland's interest in the West than soft drinks. A Polish trade delegation is talking business in Washington now. The State Dept. reports stepped-up inquiries about Poland from U. S. exporters and importers. And Marconi's Wireless Telegraph Co., Ltd., in Britain has just sold them a \$560,000 TV station. It will be Poland's biggest.



No static problems here

Too bad we can't *show* the high volume of noise in this modern tube mill operated by our Wolverine Tube Division. You would better appreciate the problems it can create, even in transmitting orders to overhead travelling crane operators from ground level.

Solving such problems calls for the kind of thinking that ignores convention. In this particular case, the answer may be radio communication between foreman and crane operator, shown above in an actual trial operation.

We're not worried if radio fails to be the answer, however. The point is we can continue

to count on more of the same kind of thinking that produced the radio idea in the first place. And eventually that kind of thinking licks problems. It also produces better products from the divisions of Calumet & Hecla, Inc.

Galumet & Hecla, Inc.

FARRICATORS OF COPPER, ALUMINUM, STEEL AND WOOD PROBUCTS— MINERS OF COPPER, PRODUCERS OF AGRICULTURAL CHEMICALS CALUMET & HECLA, INC. - CALUMET DIVISION - WOLVERINE TUBE DIVISION - FOREST INDUSTRIES DIVISION - GOODMAN LUMBER COMPANY - CALUMET & HECLA OF CANADA LIMITED - CANADA VULCANIZER AND EQUIPMENT COMPANY LIMITED

HIGHLIGHTS FROM REPORTS ON LATIN AMERICAN INDUSTRY BY THE EDITOR OF INDUSTRIA

George Browne, Editor of INDUS-TRIA, recently returned from a twomonths trip through Latin America in which he visited a number of industrial plants, participated in industrial management meetings, and met with leaders in the fields of industry, finance, and economics. During his trip, and after his return, INDUSTRIA issued a series of 3 reports on his findings.

These reports proved so helpful to companies now selling to Latin American industry, and those who are planning to, that we present here highlights from these reports. If you would like copies of the complete reports, please write to Charles S. Mill, Publisher, INDUSTRIA, 330 West 42nd St., New York 36, N. Y.

MEXICO . . . a boom economy and hard to find any predictions of a bust . . . gross national product increasing at rate of 10% a year . . . population rising at annual rate of 3½% . . . remarkable jumps in industrial production in 1954 and 1955 . . continued industrial expansion means continued heavy imports of capital goods . . . an attractive market for the U. S. manufacturer . . drive for more efficient production underway and will result in even more interest in U. S. methods and equipment.

CENTRAL AMERICA . . . individually, these countries are limited industrial markets, but as a unit, they are attractive to many manufacturers . . . a great deal of light industry is flourishing—notably in the food, textile, and building materials fields and glass plants are being considered . . no dollar problems in these countries.

PERU-BOLIVIA-CHILE . . . economy of all three is based on mineral development, and all three have infla-

tion problems . . . very attractive markets for heavy capital equipment, although there is heavy competition from Europe . . . many U. S. manufacturers are apt to neglect this area in favor of the Caribbean countries much business can and will be done, especially where the factors of performance, quality, and service are important . . . success or failure depends on the ability of the local representative . . . particularly important because a new generation of industrial management men is coming to the forefront - men who are concerned about costs and quality . . . despite problem of inflation, these countries have much to offer as markets.

ARGENTINA . . readjustments are still taking place in the Argentine economy . . . strong administration but strength must be used cautiously . . . business is trying to rebuild a debased economy . . opening up as a market and will be better . . . few plants have modern equipment and are operating only because of miracles of improvisation . . . many companies already have programs worked out to purchase new equipment and are awaiting only granting of import licenses . . these in turn depend on loans and economic aid.

BRAZIL . . . industry still growing at phenomenal rate . . . 1950 Census listed

89,000 plants and increase since that time is listed conservatively at 10% to 20% ... in almost every plant drives are underway to increase production ... per capita income rising, labor is becoming more expensive, producing a great drive for higher output, lower costs, through increased mechanization ... in many lines, the only way to be part of the market is to produce locally and those who have entered the market are generally satisfied.

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industria



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In Washington

B-52s Get a New Lease on Life

As Pentagon Rejiggers Bomber Program

A Pentagon decision to stretch out production of Boeing's B-52 heavy jet bomber is in the wind. Right now, production is running 12 planes a month at two Boeing plants, and is supposed to go to 20 monthly within a year. Schedules call for a total output of 605 planes through 1959. At least 100 have already been delivered.

Defense Dept. insiders now say it is likely that output will peak at 17 a month, with deliveries stretched out into 1960. The objective would be to keep production lines running over a longer period of time, but at a slower rate, until a successor weapon is ready for production. The assumption now is that the U. S. will have to rely on the B-52 as its major strategic bomber for a longer period of time than was originally planned.

Here are the factors behind the new plan:

 Dimmed hopes for a chemical-fueled or atomicpowered plane to take over the B-52 role until an intercontinental ballistic missile is operational. The Administration is unwilling to pour in the extra funds needed to overcome massive engineering problems.

 A U.S. intelligence reappraisal of Russia's heavy bomber force—downgrading earlier estimates of Soviet production rates and inventories of the Bison (heavy)

bomber.

 Prospects that Convair's supersonic B-58 mediumrange bomber, now being tested, may be able to shoulder long-range strategic missions. Net jet tanker refueling and the B-58's missile-launching capability may be able to extend the medium bomber's role.

President Calls on Stricken States To Chip in on Drought-Relief Plan

In a new basic approach to drought relief, the Eisenhower Administration wants stricken states to take over at least 25% of the financial burdens involved in some key parts of the program—notably those to supply emer-

gency livestock feed.

During the past three years, the U.S. government has doled out upwards of \$40-million on feed programs. State contributions have been negligible, a high Administration official says. Over-all, U.S. drought aid programs have cost about \$650-million in three years. The Administration is ready to carry on solo with such items as surplus food gifts to needy families and emergency credit programs.

The demand for state contributions toward future costs was the foremost new feature in a special drought message Pres. Eisenhower sent to Congress at midweek. New laws would be needed to force state participation, and it's doubtful that Congress will react kindly to the Adminis-

tration's suggestion.

Eisenhower's message to Congress was accompanied by

a letter from Agriculture Secy. Ezra T. Benson, who mirrored growing federal impatience at persistent attempts to maintain dryland farming in areas where recurring drought cycles breed periodic agricultural crises. When all concerned assume "appropriate degrees of responsibility," Benson wrote, dealing with the crises will be much easier—and in some cases "the problems of the natural disaster itself will be largely alleviated."

Grand Jury Opens Probe of Oil Industry; Marketing Practices Reported a Target

This week a federal grand jury settled down in Alexandria, Va.—just across the Potomac River from Washington—to dissect the oil industry in the light of antitrust laws.

Federal District Judge Albert V. Bryan, in his charge to the panel, did not specify any one target in the industry's operation. Rather, he said, the jury should find whether antitrust laws have been violated by persons and corporations involved in "interstate storage, processing, sale, distribution and purchase of petroleum and petroleum products." Off and on, the judge said, he expects this inquiry will consume "several months."

Reports persist that the grand jury is more interested in gasoline marketing practices than in recent crude price increases for crude. Critics complain that the oil industry uses a "market leader" system—under which one major company, by tradition, sets prices in a given area. These reports gain weight from the fact that relatively low-ranking employees of some big marketers were among first witnesses, including the women secretaries to the marketing vice-presidents of Sun and Atlantic.

Reopening of Suez Canal Reopens Oil Import Problem

Now that the Suez Canal may be reopened soon, the Eisenhower Administration is getting ready to take another look at one of its recurrent headaches—what to do

about the oil import problem.

This week, Arthur S. Flemming, outgoing director of the Office of Defense Mobilization, asked oil importing companies to report by Mar. 22 on their post-Suez crude oil import plans. He says this information will enable the government to decide whether restrictive action under the trade act's "essentiality" amendment is called for.

The problem has been on ice during the Suez crisis because imports from the Middle East have been slashed drastically, and U.S. oilmen have been producing for

export.

The letter leaves plenty of maneuvering room for Administration officials who must plot a course between avoiding a trade law showdown in Congress while maintaining good relations with the oil producing countries of the Middle East. At any rate, incoming ODM chief Gordon Gray will have plenty of time to familiarize himself with the problem before the time for a decision arrives.



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BEST IN RUBBER



Teamsters Due on Another Carpet

Senate disclosures of links between the Teamsters and gamblers and politicos are causing reverberations.

Meanwhile, to protect labor's good name, the AFL-CIO is grooming its own case against the truckers.

The result will surely be a showdown—and maybe even a split—between Teamsters and the federation.

A showdown between the International Brotherhood of Teamsters and AFL-CIO over violations of the federation's anti-racketeering codes now appears inevitable.

As the Senate Select Investigating Committee on Labor-Management Corruption wound up its second week of hearings, West Coast officials of the IBT were still the center of its attention. Disclosures of tie-ins between truck union officers, gamblers, and politicians were heard daily-and the names of Dave Beck, president of the Team-sters, and Frank Brewster, the union's Western leader, re-echoed across the packed Senate caucus room.

The impact, meanwhile, was spread-

· AFL-CIO's Ethical Practices Committee prepared to act in an unrelated case that could set precedents for later moves based on revelations from the current Senate hearings.

· Just as one of three unions facing suspension from AFL-CIO was trying to clear itself of charges against it, new and unsavory disclosures enshrouded its top officer (page 164).

· And, in Indiana, public reaction

to the revelations at racketeering hearings contributed to the surprise passage of a right-to-work law (page 166). · Self-Defense-The week's developments left little doubt of labor's grow-

ing vulnerability. Consequently, they made a showdown with the Teamsters necessary for AFL-CIO. Any failure to take quick, sharp issue with the nation's largest, perhaps most powerful, union over the charges mounting against it could be costly to the rest of labor.

This action may come in a four-yearold Teamsters' corruption case that hasn't been picked up by the Congressional labor racket spotlight-and that probably won't be.

I. Bribery Case

The case that could be a real test of the effectiveness of the AFL-CIO's cleanup campaign involves Sidney Brennan, the Teamsters' third vicepresident and strong man in the Minneapolis area.

Late last week, the Eighth Circuit Court of Appeals affirmed the conviction of Brennan for bribery. The Teamsters official, who has remained in office, was held guilty of sharing \$5,000 given by an employer to break a strike of production workers represented by the United Mine Workers. As part of the alleged deal, the Teamsters were to be recognized as bargaining agent.

· Inside Job-This case is currently of more importance to AFL-CIO than those building up in Senate racketeering hearings. The Congressional investigations so far have involved only the extracurricular activities of Teamsters leaders. However, the Brennan case, in which bribery is linked with traditional union policies and practices, hits directly at the heart of labor ethics.

Consequently, AFL-CIO officers are now maneuvering the Brennan case before the AFL-CIO Ethical Practices Committee, which has substantial policing power over affiliated unions and their officers. Those pressing for an Ethical Practices Committee crackdown against Brennan-and possibly the Teamsters-feel that the IBT leader's conviction leaves him vulnerable to AFL-CIO action on a number of counts based on the federation's several codes

Teamsters officers have backed Brennan to the hilt in court. A similar policy before AFL-CIO would be certain to lead to a major showdown, long before the federation is ready to demand one on the basis of the accumulating evidence before the Senate committee.

II. Go Slow Policy

There is no doubt that the AFL-CIO's leadership is fighting mad over what is coming out before the committee chaired by Sen. John L. McClellan (D-Ark.). However, the federation's policymakers aren't inclined to rush headlong into a cleanup program based on the day-to-day results.

Instead, the present inclination is

to let the information against the Teamsters pile up, to see what pattern of testimony develops-and if there is a trend toward use of the Fifth Amendment in violation of AFL-CIO rules.

· No News-Actually, the McClellan hearings haven't turned up much yet that AFL-CIO didn't know. Privately, though, federation leaders say that the committee has much more to bring out in the weeks and months ahead. They indicate that if there is to be a federation crackdown on its largest affiliate, some of the most effective ammunition may come out of the future revelations.

This backs up the go-slow inclination of the federation leadership. It means that any showdown based on the Mc-Clellan hearings is at least months away -not before the next AFL-CIO execu-

tive council meeting in May.

III. Lines Drawn

Meanwhile, the parties are drawing up their battle lines, and some skirmishing is going on. For instance:

· At the end of the McClellan committee's first week of hearings, 200 Teamsters officials on the West Coast met and threw their support behind Brewster and Clyde Crosby, an international organizer on the West Coast. They denounced charges that the officials were linked with vice and racke-teering; the group blamed "antiunion forces" for attacks on the Teamsters.

· James R. Hoffa, Teamsters Central States leader and unofficial director of the truckers' union, said that he has seen "no evidence of corruption" in the testimony before the hearings. Hoffa is scheduled to have a turn before the committee when it shifts its attention to New York next month.

· Dave Beck lost out on an expected appointment to an International Labor Organization meeting in Hamburg, Germany. He had told the Mc-Clellan committee that his "service" to ILO would keep him abroad most of this month. McClellan conferred with Labor Secy. James P. Mitchell. The latter dropped Beck as a representative

· And James B. Carey, AFL-C1O vice-president and firebrand president of the International Union of Electrical Workers, formerly CIO, minced no words in describing Beck as "a traitor to the labor movement." He said that the Teamsters are in danger of being expelled from AFL-CIO-and should be. This could be the start of a CIO bloc-vs.-Teamsters fight inside AFL-CIO. END



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Laundry Mess

LWIU head is unmasked as former labor extortionist, complicating union's job of clearing itself on welfare fund.

The three unions faced with AFL-CIO suspension on welfare fund abuse charges are trying frantically to clear themselves. One of these unions—the Laundry Workers International Union—is finding the going pretty rough. LWIU's difficulties give a clear indication of the problems facing the other two unions—the Allied Industrial Workers and the Distillery Workers—in their efforts to clean up before the May deadline set by AFL-CIO's executive council (BW—Mar.2'57,p141).

In its drive for acceptance, LWIU hired a public relations counsel who issued a detailed fact sheet late last month on the union's welfare fund operation. Chicago newspapers carried advertisements paid for by LWIU's Chicago local showing a comparative financial statement covering operations of the international union's welfare fund for the past five years.

• Leader Is Unmasked—Last week, though, the respectability campaign ran into a major snag. After testifying before a special federal grand jury in Chicago, LWIU Pres. Sam J. Byers admitted to reporters that he is John Jilson, a convicted labor extortionist. Under the name of Jilson, Byers had been convicted in 1934 of conspiracy to destroy merchandise, terrorize, and extort money from Chicago department store owners who refused to hire members of his union. At that time, Byers was president of the International Bill Posters Union.

Byers drew the maximum penalty of one-to-five years in prison and a \$2,000 fine. Earlier, Byers had been indicted but not convicted in connection with the murder of a Chicago department store guard.

After serving his sentence, Byers began working his way back into the labor movement. He reportedly long has had close connections with the International Brotherhood of Teamsters. In 1940, he had his name changed legally from Jilson to Byers. A year later, showing the same leadership qualities that got him the billposter union presidency, Byers became head of LWIU.

• Federal Probe—The grand jury hearings in Chicago were part of a special federal investigation of possible violation of federal statutes by unions. To date, main attention has centered on the laundry union. Heading the probe is Max H. Goldschein, special Justice



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EDWARD T. DICKINSON COMMISSIONER OF COMMERCE Dept. attorney and widely known as a racket buster. Goldschein plans further hearings. It is believed his next stop will be in Newark, N. J., bailiwick of Louis Saperstein, an insurance broker cited by a Senate investigating committee on charges of embezzling nearly a million dollars from the LWIU welfare fund.

• Fund Embezzlement—Senate committee investigators found that Saperstein held back on premiums paid to the Security Mutual Life Insurance Co. He did this by paying premiums for "a lesser number of employees than was actually paid for by the union's social security department [administering the welfare fund] and also by postdating the coverage of certain locals." The committee also reported that at least one LWIU official, Eugene C. James, was involved with Saperstein in the looting. James, then secretary-treasurer of the 73,000-member international union, has given up his national post but still runs Chicago Local 46.

· Union Attitude-At midweek, LWIU had taken no action on Byers' revelation. But it is clear that if Byers remains as LWIU president, AFL-CIO's attitude toward the laundry union will become even more hostile than it is now. The code of ethics adopted by the AFL-CIO executive council in Miami contains one section aimed at preventing anyone from holding union office who "is commonly known to be a crook or racketeer preying on the labor movement." ceivably, this clause might not apply to Byers who maintains that he has done nothing illegal since prison.

Another part of the code holds that "if a person has been convicted of a crime involving moral turpitude offensive to trade union morality," he should be ruled out of any office or responsible job in the labor movement. This clearly pertains to Byers.

· Compliance Difficulties-As the first clear violation of the AFL-CIO code at such a high level, the Byers situation raises questions on how accused unions can comply with the AFL-CIO "clean up or else" order. It is unlikely LWIU can take any action by May that will satisfy officials of the top labor body. Probably the only action that would meet this test would be wholesale removal of top LWIU officers. This would require a membership convention. The union's quadrennial convention is slated for later this year.

• No Official Comment—Officially,
AFL-CIO won't comment on the Byers case. Spokesmen point out that Pres. George Meany is in a "judicial" position with respect to LWIU since it has, in effect, been put on trial. Hence, he can't say anything. Privately, AFL-CIO insiders see unmasking of Byers as another nail in LWIU's coffin. END



FACTORY



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Indiana Unions Shout in Vain



the statehouse at Indianapolis, thousands of marchers wave their placards. The door of Gov. Harold W. Handley's office is upper left background.



OUTSIDE

the building, other thousands clamor to get in. The demonstration went on for three hours, but Gov. Handley remained firm against a veto.

Storming the statehouse after the legislature had passed a right-to-work law, they fail to persuade the governor to veto the bill.

Despite an angry three-hour demonstration by 10,000 unionists at the statehouse (pictures), Indiana is almost certain to be the 18th state to adopt a "right to work" law that bans the union shop. The Hoosier legislature passed such a measure last week. Republican Gov. Harold W. Handley told unionists that he wouldn't yeto it.

Demonstrators who swarmed through the statehouse shouted for a veto. Placards protested "this law of suppression," and described the measure as a "vicious bill which will lessen jobs, lower living standards." They reminded Handley that he had spoken out against right-to-work legislation, particularly when bidding for support of the state's 600,000 organized workers.

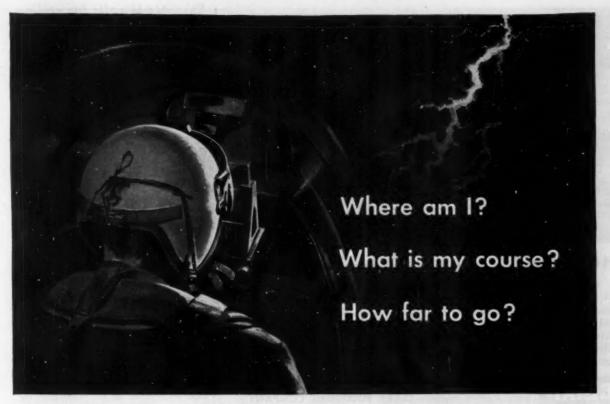
• Governor's View-Although the union demonstration served its purpose of putting labor's protest forcefully before the public, it didn't change the governor's stand on the proposed law. A 120-word statement repeated what he had announced before: In his opinion, the bill "does not accomplish the purpose for which it is intended [and] is not consistent with the stand of most Hoosiers that there should be only a bare minimum of government interference in labor-management relations."

But, he added, he must allow it to become law without his signature because regulatory legislation is "the responsibility of the legislature."

• Shock to Labor—The passage of a bill barring compulsory unionism in industrial Indiana surprised—and shocked—labor all over the country. It underscored union leaders' fears of a spreading public sentiment for labor curbs (BW—Mar.2'57,p141). They called for a stepped-up campaign against "concerted drives to hamstring labor with new and tougher right-to-work laws."

Legislatures in all except three states (Kentucky, Mississippi, and Virginia) meet in regular session this year. In all of them, legislators are paying close attention to revelations that are coming out of the Senate labor racketeering hearings in Washington (page 163). As these revelations pile up, pressure will grow for new, tight regulatory laws.

So far, right-to-work bills have been introduced in eight states and, by labor's count, are pending in at least a dozen others. The proposals are backed by organized farmer and employer groups that contend they aren't anti-



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"... NAM calls for ending compulsory union membership in any form as step against labor monopoly . . . '

STORY starts p. 166

union but want only to preserve an individual's freedom to work whether or not he belongs to a union.

· NAM Active-A National Right to Work Committee, with headquarters in Washington, is active on the sidelines of the state legislative campaigns. Both the National Assn. of Manufacturers and the U.S. Chamber of Commerce favor laws that give workers the right to join unions but that outlaw contracts that would compel them to do so.

NAM last week issued a new report -to be widely circulated-criticizing an "excessive accumulation of uncurbed power in the hands of unions and abuses of this power by union leaders.' As one of seven steps that should be taken to break up the "monopoly power exercised by labor unions," NAM called for ending "compulsory union member-ship in any form."

Currently, NAM's legislative eyes seem to be more on the states than on Congress (BW-Feb.23'57,p67).

• Hoosier Surprise-The right-to-work bill passed the Indiana House by a 54 to 22 vote and the Senate by 27 to 23. It received organized support of employers, reinforced by farm groups. The Hoosier legislature is Republican, but it hadn't been expected to pass restrictive measures. Labor is strong in the state, whose diversified industry includes huge steel mills that employ thousands of members of the United Steelworkers.

Generally, two things are believed to have contributed to the unforeseen support for the right-to-work law campaign in Indiana. A riot at the Perfect Circle Corp.'s piston ring foundry in New Castle in October, 1955, developed into a gun battle that wounded eight persons. The drive for restrictive legislation in the state got under way during the intense, and adverse, public re-action to the riot. Echoes of the Perfect Circle melee were heard in the heated legislative debate in recent weeks.

Meanwhile, strike trouble flared again in the state more recently. The baby daughter of a nonstriker was critically wounded in Princeton by shots fired at the worker's home. At least one legislator said that he felt compelled to vote for restrictive legislation because of this latest violence.

During the hot campaigning, Gov. Handley-who got some labor support in the last election-announced that he would not "carry the torch for a rightto-work bill." This encouraged the Indiana State Federation of Labor to mobilize the quick—but unsuccessful—"march" on Indianapolis after the legislature acted.

 In Other States—Meanwhile, pressure builds up for similar laws in other states.

In Idaho, farm and ranching organizations, with some employer support, came close to success. The House passed a right-to-work measure by a vote of 33 to 26, but the Senate rejected it by a 23 to 21 margin. Efforts to put the right-to-work proposal up to a state referendum also failed. Similar efforts to ban the union shop failed in Idaho two years ago—also by a 2-vote margin in the Senate.

In Delaware, efforts to push through right-to-work legislation got at least a temporary setback when a bill was bottled up in committee. Delaware barred the union shop in 1947 but the prohibition was repealed two years later—by a 1-vote margin in the House.

In Colorado and Wyoming, efforts

In Colorado and Wyoming, efforts to bar the union shop through amendments to civil rights proposals failed.

• On the Horizon—Bills are pending in Connecticut, Ohio, Kansas (where right-to-work legislation was vetoed by the governor in 1955), Maryland, and West Virginia. Both proponents and opponents of restrictive legislation expect the real fights to develop in Kansas and Maryland. The moves in Connecticut, Ohio, and West Virginia are expected to fail.

Meanwhile, right-to-work law pressures are reported building up in California (despite the known opposition of Gov. Goodwin J. Knight), Vermont, New Hampshire, Wisconsin, Wyoming, and a number of other states. Strong right-to-work law lobbies are reported busy in Illinois, Minnesota, Oklahoma, Oregon, and Washington. Even New York—which has a reputation for liberal state labor laws—hasn't escaped pressure for a ban on the union security clause in contracts.

On the other hand, bills to repeal the union shop ban have been introduced for the third straight time in the Nevada legislature, and Democratic governors of Tennessee and Iowa have urged legislatures to erase right-to-work laws that are on their states' statute books. No action is expected on the recommendations.

The 17 states that have right-towork laws are Alabama, Arizona, Arkansas, Florida, Georgia, Iowa, Mississippi, Nebraska, Nevada, North Carolina, North Dakota, South Carolina, South Dakota, Tennessee, Texas, Utah, and Virginia. An 18th state, Louisiana, repealed a similar law for industrial workers in 1956—but left most curbs in force for agricultural workers. END





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In Labor

Decertification of Honeywell Engineers Sought by Foes of Marriage to UAW

The Federation of Honeywell Engineers, a union of engineers and technicians at the Minneapolis-Honeywell Regulator Co., in Minneapolis, voted last week to affiliate with the United Auto Workers. However, UAW may be in for a fight over the small independent.

Hours after the union voted, 579 to 116, for UAW affiliation, a campaign got under way to decertify the Federation of Honeywell Engineers as bargaining agent for 2,000 professional and technical employees.

The FHE has represented the Honeywell group for 10 years, as an independent loosely affiliated with the Engineers & Scientists of America. It actually has as members only about half of the employees it represents. According to decertification sponsors, the FHE owes its existence through the years to "neutrality" and "passiveness" on the part of about 1,000 nonunion people. Letters mailed to all professional and technical employees by a committee of 39 urged repudiation of FHE if it goes through with the authorized shift into UAW.

The committee called for support of all who "believe we should not be the 'guiñea pig' organization for the UAW to further its ambitions and power empire." The auto union is counting on the Honeywell union as the nucleus for its new Aircraft & Avionics Engineering Council—set up to spearhead organizing among engineers

and technicians (BW-Feb.23'57,p82).

ILA Hopes New Dues Setup Will Help Keep Dock Peace Despite Satraps in Locals

Is there a reasonable hope of East Coast waterfront

peace extending into 1960?

That's the big question shippers are asking now that the International Longshoremen's Assn. and employers have signed a three-year contract (BW-Mar.2'57,p147). Ordinarily, the answer would be affirmative. When a union wins substantial concessions in a long-term pact—as ILA did—it usually can be counted on to live up to it.

However, ILA is not the usual disciplined and responsible union. Many of its locals, and particularly those in New York, exist as the private bailiwicks of strong local dock bosses. They have little regard for over-all ILA agreements; they live by a contract—or defy it—at will.

Since contracts were signed ending the latest dock strike, walkouts have occurred on several piers. One local leader has admitted that his membership intends to "keep pressure on," regardless of the peace agreement.

In the circumstances, hope of a lasting dock peace may not seem justified. But one concession that employers gave ILA's president, Capt. William Bradley, may be a step toward stability. For the first time, ILA now has a checkoff of dues payable directly to the international.

In the past, locals collected dues. This made ILA

over-dependent on its locals. Its leaders couldn't try to get tough with local leaders who controlled the dues pursestrings.

Now, with dues payments flowing into the international, ILA's international leadership has an opportunity to exert the authority necessary for a reasonably disciplined union. According to Bradley, it intends to do so.

Labor peace on the docks for the next three years—and possibly the future of ILA in the labor movement—might depend on how strongly and how successfully this authority is exerted on traditionally rebellious ILA locals.

Painters Open Fire on Groups Seeking to Bar Highway Signs

Efforts are being renewed in both houses of Congress to bar outdoor advertising along the 41,000 miles of highways to be built under the Federal Aid Highway Act. Sponsors want to preserve the scenic beauty of the countryside.

The Brotherhood of Painters, Decorators & Paperhangers is up in arms over the proposals. It likes natural beauty as much as anybody else, it insists, but at the same time it likes to see men working and collecting regular pay checks. If signboards are barred, "many thousands of workers in the outdoor advertising industry will suffer unwarranted job loss," according to the union.

The Painters and unions of carpenters, sheet metal workers, electricians, and other skilled craftsmen in the sign industry allied with employers last year to defeat an anti-signboard amendment to the housing bill.

Weinberg, Shaper of SUB Plan for UAW, To Map Out Other Long-Range Goals

When the United Auto Workers won a supplementary unemployment benefits clause in 1955, Walter Reuther gave much of the credit to Nat Weinberg, UAW's research director who had spent much of his time for two and a half years in an exhaustive study of guaranteedwage plans.

That wasn't the first time Weinberg had taken a new, raw UAW objective and shaped it into definite form. And there are indications now that auto bargaining in 1958 will center to an important degree on new Wein-

berg-molded demands.

UAW recently announced that Weinberg has been relieved of his administrative burden as head of a 21-member research department—one of labor's largest (BW—Oct.6'56,p55). He has a new assignment, to concentrate full-time on such long-term questions as the effects of automation on auto employment, the possibility of cutting the work week, and how SUB plans can be expanded.

In effect, this means he is detached from other duties to work even more closely with Reuther in planning for 1958—and beyond that. It's another sign of the seriousness with which UAW views its next bargaining round.

Woodrow Ginsburg, another highly regarded labor research director, with the United Rubber Workers for the past 10 years, will replace Weinberg at the head of the UAW department.



PHOTOGRAPH BY HARSH OF OTTAWA

Bruce Leffingwell reaches the breaking point dozens of times each day

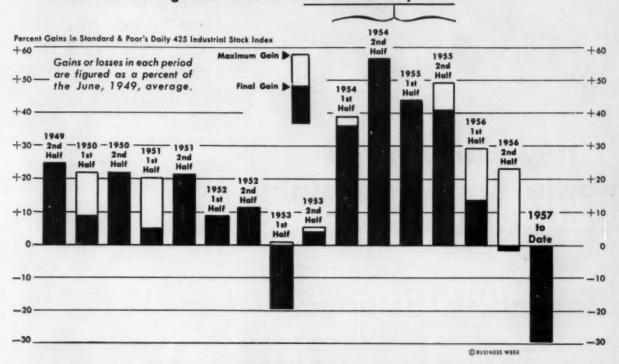
• Tension, fatigue and strain make up a large part of Bruce Leffingwell's life... and he likes it that way. For Bruce is one of a large staff of experienced metallurgists employed by Sharon to constantly test production steels—making certain they always conform exactly to customer specification.



THE MARKETS

Since 1949, Stock Prices Have Gained 250% . . .

. . . But most of the gain came in these four six-month periods



Is New Market Trend Emerging?

So far stock prices in March are modestly ahead of February's low, but trading volume is still off.

 One Big Board member thinks a new market pattern is in the making.

The firm believes well-defined bull and bear markets are being replaced by less severe trading ranges.

Early March Big Board trading sessions haven't as yet shown any signs of returning to the heavy selling waves that gave many Streeters the jitters a few weeks ago.

Instead, they've often revealed rallying tendencies. The middle of this week, Standard & Poor's new 425-industrial index (page 43) quietly perched at levels 5% above its February low. Earlier many had feared the March index might be testing the depths of that low.

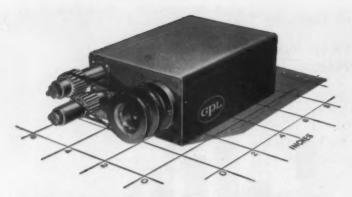
Trading volume, however, has remained discouragingly low. And the advance has been selective, rather than general. These developments are keeping the old Street controversy raging: Have we been in a bear market since last summer or are we only going through one of those traditionally "refreshing" consolidation periods?

• New Theory—It's possible this dispute has become academic. One oldline Big Board member, E. F. Hutton & Co., thinks so. In its current market letter, the firm points out: "There has been evidence lately that the . . . [old] . . . well-defined bull and bear market trends . . may be in the process of developing a less sharp or more gradual pattern." It asks: Are trading ranges now taking the place of the former severe bear trends?

• Evidence-To back up this thesis, Hutton points out that the postwar performance of the averages "began with a trading range extending from 1946 to 1949." Then, as the chart above confirms, "a general rise developed . . . [that] lasted about two years, followed by another two-year trading range, and again two years of advance" that brought the market to its 1956 peak. Since then, Hutton adds, we've seen "another trading range and the pattern so far is about the same as the previous ones in the past 10 years as to character and extent" even though "not yet as to time."

Hutton believes the long-term pattern of the current market is upward and primarily reflects economic growth and inflation. The firm now wonders if future "corrections of the advances in this long term pattern" may not prove "a period of selective backing and filling rather than a sharp reaction or bear market decline."

As Hutton itself notes, these conjectures would seem to jibe with the objectives of "modern economic planning and government activities in the economic field"—to smooth out major apps and downs in the national economy.



tiny camera sees some shocking sights

THE CLOSED-CIRCUIT TV CAMERA shown above is the world's toughest. Its name: the RUGGEDIZED. The maker: GPL.

The extraordinary feature of the Ruggedized is its unique ability to withstand shock, noise and vibration. Because of this ability, businessmen and engineers are now able to get clear picture reports on many industrial operations never before seen.

In many instances, the barrier to sight has been vibration too intense or noise too loud for any human (or TV camera) to get close to. Rocket and jet test-stand operations—where the Ruggedized is now being used extensively—are examples.

used extensively—are examples.
In other cases, inaccessibility has been a complicating factor. To overcome this difficulty, the Ruggedized was made tiny as well as tough.

GPL's Ruggedized camera can withstand temperatures of minus 55°C to plus 60°C, humidity levels of 100%, and is spray-proof. Forces exceeding 15 G's in each of its three axes, noise levels as high as 175 decibels and altitudes over 70,000 feet do not affect its picture detail.

If you'd like to look into your

If you'd like to look into your own industrial operations — including those industrial operations you never thought see-able—get in touch with us for full information. If you wish, we will be glad to arrange for a demonstration of the Ruggedized, or any other GPL closed-circuit TV equipment, in your own office or plant by local GPL representative. Write, on your letterhead, to: Mr. N. M. Marshall, General Precision Laboratory Incorporated, 62 Bedford Road, Pleasantville, N. Y.



A spectacular instance of the ability of the Ruggedized to get into — and send pictures out of—tight places is its performance inside the plenum chamber of an F-104.



Even bone-shattering concussions can't disturb perfect pictures of GPL's Ruggedized camera, designed specifically for the most severe applications.



General Precision Laboratory Incorporated

Wall St. Talks ...

... about GNP figures
... outstanding loans ... new
offerings of commons . . .
industrial expansion.

Don't rely too much on gross national product figures as an index of business activity. They can be misleading when used that way, Wall Streeters warn. In 1937-38, for example, GNP shaded off only 6% while the FRB industrial production index was off 34% at one point and corporate earnings were down even more sharply. Again, in 1948-49, GNP stayed level while unemployment climbed to worrisome heights, industrial production slumped 7%, and before-tax corporate earnings skidded 21%.

Outstanding loans of banks will remain generally steady at a high level for the rest of 1957, leading bankers expect, though borrowings to meet mid-March, mid-June tax dates will probably bulge the total temporarily. (Some client companies are reported already discussing tax loans for mid-June.) Bankers don't expect basic loan rates to show much change.

New offerings of common stock continue to rise. Such sales totaled \$2.3-billion last year, compared with \$2.1-billion in 1955 and only \$1.2-billion in 1954. The last quarter of 1956 was especially active, and the uptrend has since accelerated if anything. Deals involving stockholder subscription rights have increased sharply, and many more of these are expected over the near term.

Expansion of industrial plant has gone so far, says Harold B. Dorsey, head of Argus Research Corp., that we now have "the capacity to build 10-million refrigerators per year, whereas the economy can absorb barely 4-million."

How a prominent open-end fund now views growth stocks: "Our investments in [them] are small," reports Affiliated Fund president H. I. Prankhard 2d, "because we believe many . . . are still substantially overpriced in relation to their values."

Investment companies' holdings of steel shares recently totaled \$462-million—twice as much as two years ago. All but \$33-million of this total was in common stocks. Largest holdings of commons were: U.S. Steel, \$109-million; Bethlehem, \$100-million; Arm-co, \$53-million; Republic, \$43-million, and Youngstown, \$32-million.

ANOTHER COMMERCIAL USE FOR FLUORINE

distinction into sparkling crystal - through

fabulous fluorine

To etch and polish glass rapidly, industry uses hydrofluoric acid (HF)—an inorganic compound of fluorine. HF is also vital to growth industries such as aluminum production, petroleum refining, and uranium processing.

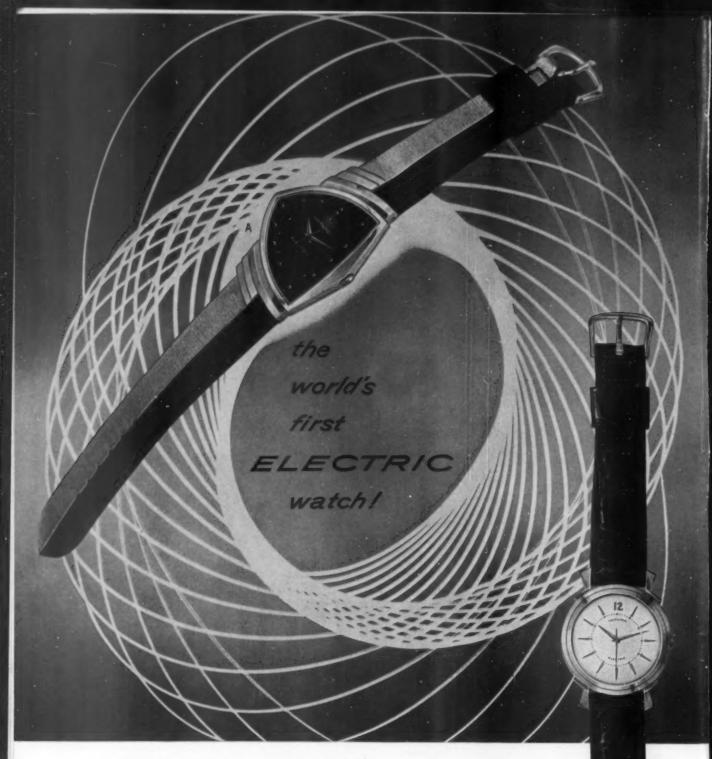
Hydrofluoric acid is the basic fluorine chemical for industrial uses. As the original bulk producer of anhydrous HF, Pennsalt has the advantage of considerable lead time . . . is ranked a

prime force in fluorochemical research.

ASK US! Pennsalt will gladly work with you to develop commercial applications for fluorine, the "great improver" of many products—as diverse as rocket fuels and metal cutters, aerosol propellents and refrigerants. Write for technical assistance to Customer Service Department 285, Pennsylvania Salt Manufacturing Company, Three Penn Center Plaza, Philadelphia 2, Pa.



PENNSYLVANIA SALT MANUFACTURING COMPANY



Everything about the Hamilton Electric Watch makes history. Sense, too. It's the first watch to require no winding—hand or automatic. A single miniature energy cell does all the work. Even Hamilton has never made a more accurate watch. It needs less care than any you've ever owned. It's shock-resistant, anti-magnetic. Your Hamilton jeweler will tell you more. A. Ventura I, 14κ gold, \$200. B. Τιταν, 10κ gold-filled, waterproof*, \$89.50. (Van Horn, Masterpiece series, 14κ gold, \$175.) Hamilton Watch Company, Lancaster, Pa.

* PROVIDED ORIGINAL SEAL IS RESTORED IF OPENED FOR SERVICE

HAMILTON

the watch jewelers recommend more often than any other

PERSONAL BUSINESS

BUSINESS WEEK MAR. 9, 1957



When you donate to your college, do you just write out a check and let it go at that? If so, maybe the "planned" methods of giving would be worth your looking into—you might be able to do more for the school, and get a favorable break yourself, too, in terms of taxes and income.

Like many executives these days, you probably find yourself digging into your pocket at least once a year to support your alma mater. This is fine on both sides—the college benefits, and you demonstrate good spirit as an alumnus and citizen. (And, as an added incentive, you can often arrange your gift so that a "pet project" is carried out in your name—a shelf of books, a professorship fund, a student scholarship.)

But is your gift intelligently planned?

Have you looked over the several ways to contribute—for example, giving securities? Aside from giving cash, this is the most common method—an advantage, especially where you hold appreciated securities.

Suppose your income is \$43,000, putting you in the 56% bracket; years ago you bought securities at a market price of \$20; today they list at \$100.

- If you donate \$100 in cash to a college from current income, your actual cost is just \$44 because of your 56% bracket.
- If you sell one of the securities and later make a \$100 cash donation, the gift costs you more. You have to pay a \$20 capital gains tax on the sale of stock (25% of the \$80 increase in value), in addition to the \$44 cost of a \$100 cash gift—as illustrated in the first example—for a total of \$64.
- However, if you donate the security itself, instead of cash, you pay no capital gains tax on the appreciation, but can still deduct the full current market value of the security. Your gift to the school is worth \$100; you avoid a \$20 capital gains tax and reduce your regular income tax by \$56. This saving (\$20 plus \$56) means that your actual cost of making the gift is, in a sense, only \$24.

Here's a brief rundown of three other methods for aiding colleges—all fairly new and growing more and more popular:

• Gift annuities—This plan is offered by a number of schools, including Vassar, Dartmouth, Wittenberg, Pomona. The donor buys an annuity from the college and is guaranteed a fixed annual income for life. Upon his death, the school gets the balance. The donor gets a tax deduction for the cost of the annuity, minus the cost of buying the same annuity from an insurance company—this difference represents the gift to the college. (He pays income tax on only a small part of each annuity payment received. The part that represents a return of capital is not taxed.)

Suppose the donor is a widower, 65. If he buys a \$2,000 gift annuity from his college, \$430 is a gift, and \$1,570 is the actual cost of the annuity. He would get \$102 per year for life.

• Life income benefit plan—Under this arrangement after the donor turns over a lump sum to the school, he is guaranteed a lifetime income at the same rate of return the college earns on its endowment fund (4½% is average). At his death, the principal goes to the college. The donor can also arrange to have the income paid, upon his death, to his wife or child.

The donor gets a charitable deduction equal to the amount transferred to the college, less the lifetime payments. He deducts the *present value* of the principal that will remain after his death and the death of his income beneficiary, if any—figured on an actuarial basis according to an Internal Revenue Service formula.

· Charity and income benefits plan-Unlike the others, this plan (at

PERSONAL BUSINESS (Continued)

BUSINESS WEEK MAR. 9, 1957 Barnard, Bryn Mawr, Iowa State, and others) offers a hedge against inflation. The donor selects a mutual fund and sets up a trust with the fund custodian as trustee. He gets income from the fund for life, and can arrange for his wife to have it for her life after his death. At the end of the life payments, the principal goes to the college.

The income here is not only interest and regular dividends, but also capital gain dividends. Appreciation of the investments of the mutual fund, along with stock splits and liquidating dividends, can often increase the trust fund's value and thus hedge against inflation.

Suppose the donor is a retired executive, single, 64, with an income of \$15,000. His tax deductions are \$1,600 (standard deduction plus personal exemption); his tax is \$4,002. If he sets up a mutual trust fund of \$4,592, he gets a deduction of \$3,000—the present value of the principal that will go eventually to the school. Now, with deductions totaling \$3,600, his tax becomes \$3,172—\$830 less than before.

Assuming a $4\frac{1}{2}\%$ return on \$4,592, the donor receives annually \$207. But since he has saved \$830 in taxes (less any added tax he pays on the \$207), his actual investment is only \$3,762, not \$4,592. A \$207 return on this amount figures out to 5.5%—not including any capital gain dividends.

Some non-educational groups, too, offer one or more of the above plans to donors—for instance, the Salvation Army, the American Bible Society.

Too many executives around the country, and widows, are being snared by publications that have nothing but "praise for sale." The National Better Business Bureau has just sounded a nationwide warning.

- The crudest of these vanity publications is the "puff sheet"—usually in booklet form and limited in its issue. The "publisher" writes an item full of praise for an executive or his firm, then phones or writes for approval. He promptly high-pressures the executive into buying copies or "reprints" for publicity. But if the executive won't place an order, the article never appears. A "puff sheet" has no regular subscribers or publication dates.
- More subtle is the disreputable biographical publication—not to be confused with legitimate directories such as "Who's Who in America." Here the "publisher" mails a questionnaire—usually to the widow of an executive—saying he has been selected for listing because of his career and reputation, and asking for information and maybe a picture. This is followed by some persistent high pressure to land an order.

Remember: Reputable publishers rarely seek advance agreement to buy copies as a prerequisite for including a biography or other material. If in doubt, check the last issue of the publication at a library, or contact BBB.

Field and stream campers can now take their private "motel" wherever they go. The Touri Camp, a heavy duty tent with steel rod construction, will fit atop any sedan and unfold into an ample shelter with twin bunks, 6 ft. long. Write to J. H. Vartian Co., 37 Chestnut St., Ridgewood, N. J. (\$349).

Manners and modes: The first Japanese amateur movie camera has hit the American market—the Canon 8, a precision-made 8-mm. job (single lens, \$159.50). . . . When you plan your Mt. Everest trip, remember the government of Nepal is now collecting a \$630 fee for climbing peaks 26,000 ft. and over.

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and watch her
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CONNECTICUT GENERAL

GROUP INSURANCE PENSION PLANS HEALTH ACCIDENT LIFE

A Progress Report on Faculty Salaries:

UP...But Not Nearly Enough

THE CHART on this page provides a report of the progress being made in solving a problem of crucial importance to every American. The problem is that of seeing that college and university faculty members get decent salaries.

This new chapter, which brings the story forward two years—from 1954, when it was last dealt with in this series of editorials, through 1956—has a decidedly cheering element. For in the last two years faculty salaries have made real headway.

Two Years of Improvement

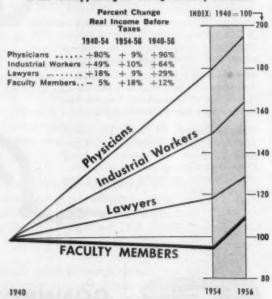
In 1954, in terms of what their salaries would buy, faculty members as a whole were actually worse off, by 5%, than they had been fourteen years earlier. As the chart shows, over the same period the real income of the average industrial worker had increased by almost half. And, in what it would buy, the income of the average physician, with professional training comparable to that of the average faculty member, had jumped by 80%.

In 1956, however, the average faculty salary would buy about 12% more of goods and services than it would in 1940. Relative to where they were two years before, faculty salaries showed a larger gain over the two years than those of any of the

other groups whose salary progress is charted.

This movement of faculty salaries in the right direction has many contributing causes. The biggest single boost was given by the great Ford Foundation gift of half a billion dollars to our colleges, universities, and hospitals, almost half of which was ear-marked for faculty salary increases. Gifts from business firms have also

What is Happening to College Faculty Salaries



Data: Council for Financial Aid to Education, U. S. Dept. of Commerce, U. S. Dept. of Labor, National Association of Education Research Dept., McGraw-Hill Dept. of Economics.

helped a lot. And so, in many cases, have stepped-up money-raising campaigns by alumni groups and cooperative regional and state groups of colleges.

Still a Long Way to Go

However, faculty salaries started their ascent from such a dismal depth that they still have a long, long way to go up before there is room for the comfortable conviction that they are fair, or even safe, from the standpoint of protecting the nation's vital interests. It still remains possible to find many shocking companion pieces for the following incident recently reported to a McGraw-Hill executive group, working on problems of financial aid to higher education, by the president of an illustrious small liberal arts college.

"The recruiting officer of one of our large industrial companies came to our campus a few weeks ago," the college president said, "and offered five of our seniors higher salaries to start working for that company when they are graduated next June than the salary received by any member of our faculty. And the seniors, of course, promptly went to their professors to seek advice on whether or not they should accept. It doesn't take much imagination to see what this sort of thing does to the morale of a faculty."

Senior Teachers Fare Badly

One of the more devastating things it does, of course, is to make the more experienced college and university faculty members receptive to the idea of going to greener pastures, currencywise, in business and industry.

For these senior faculty members the financial pounding in the past 16 years has been even worse than the chart indicates. While the average real salary gain reported by the chart has been 12%, the average salary of a full professor still buys less than it did in 1940. This is because most of the salary increases have gone to beginning instruc-

tors, for whose services industry has been providing the sort of competition reported by the liberal arts college president.

And it creates this financial lackluster of posts as senior college faculty members right at the time their services are needed more than ever to handle the oncoming flood of college and university students. Between now and 1970 college and university enrollment is expected to double.

What is Needed Now

What is clearly needed is a continuation and intensification of the drive to increase their salaries to a point where college and university faculty members will be sharing somewhere near fully in the general prosperity of the nation. It could be counted good progress in this direction if over the next two years faculty salaries on the average were to go up another 12%, with most of the increase concentrated in the senior faculty ranks. And this can be made possible only through more outside contributions.

There is reason to be encouraged by the progress that has been made over the past two years in bailing college and university faculty members out of the terrible financial hole into which they were allowed to slide. But there is the most urgent occasion to keep at it and harder.

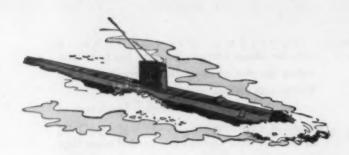
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Donald CMcGraw

PRESIDEN'

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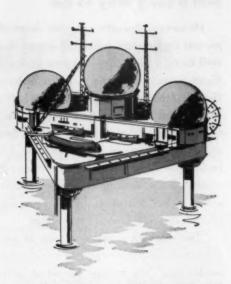


USS NAUTILUS

AND

TEXAS TOWER No. 2

have much in common
—including
specification adhesives



"Texas Tower No. 2" was so named because of its resemblance to some of the oil drilling platforms in the Gulf of Mexico. Officially it is U.S. Air Force Station, Georges Bank. It is the first of five radar stations being established in the North Atlantic area.

The platform stands 81 feet above water level. The lower deck—just below this platform—is a world of boiler rooms, power plants, fuel and water tanks, motors, generators, pumps, and blowers. As in the USS Nautilus, it is this highly complicated assortment of equipment which keeps the unit operational. A high percentage of this equipment, together with connecting pipes and ducts, are scientifically insulated. It is vital that the heat stay where it belongs—and the cold where it belongs.

In both of these all-important units of our national defense, the efficiency of the insulation is maintained with the help of Arabol Lagging Adhesive.

This adhesive was built to government specifications for use on ships of many types during World War II. Since the end of the war, this adhesive has "come ashore" almost under its own power. It gained a reputation for efficient, economical performance which soon found it a place in the boiler rooms, power plants, heating and air-conditioning units of many types of buildings on land.

As with all Arabol Adhesives, this nowfamous Lagging Adhesive can be largely specification-formulated to meet particular conditions. These specifications range from vital matters of temperature and humidity—indoors and out—to matters of color. Once the lagging adhesive has been applied, painting and maintenance costs are at a minimum.



We invite your consideration of Arabol Lagging Adhesive—just as we invite your consideration of an Arabol Adhesive for each and every application in the making, packaging, labeling or shipping of your wares.

We operate in the belief that for each application there is only one specific adhesives formula which can best meet all the requirements of both purpose and method of application. We invite the opportunity to work with you in finding the formula specifications that can best suit your purpose. The difference between run-of-mill adhesives and specification adhesives is fractions of pennies—many dollars in performance and satisfaction. For illustrated specifications on Arabol Lagging Adhesive, kindly specify Book #16.

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Making a Machine Run Itself

The no-hands technique is used successfully on the automatic assembly lines. Now it is being applied to low-volume or custom work by standard tools.

THE BORING machine in the picture at right can be operated almost literally by a child. After the man pushes a button, it takes its instructions from the stream of punched tape—there's no need for an experienced machinist to position the work piece or to continually adjust the controls.

The machine is guided by numerical control, a specialized form of automation that's suddenly making a lot of headway after years of development. Numerical control is exerted on machinery through the use of punched or magnetized tapes or cards. It does for the custom-job or low-volume machine what the built-in cams, templates, and limit stops do on the more familiar high-volume automatic production line.

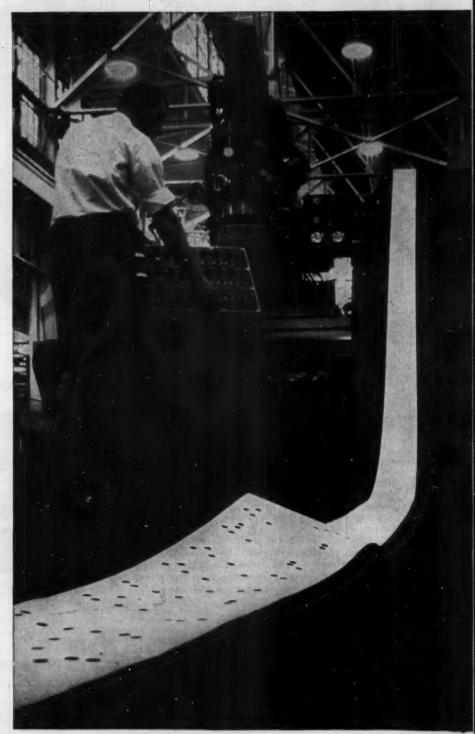
 Different Approach—In the highvolume line, work is turned out by a battery of specialized machines, each performing perhaps only one operation.
 Volume justifies the long and expensive work of designing, building, and setting up these claborate devices.

The no-hands control of machines to do a variety of short-run jobs is a different matter. It calls for versatility and flexibility rather than big volume on a repetitive basis. Here the controls over the machine can best be coded on tape or cards.

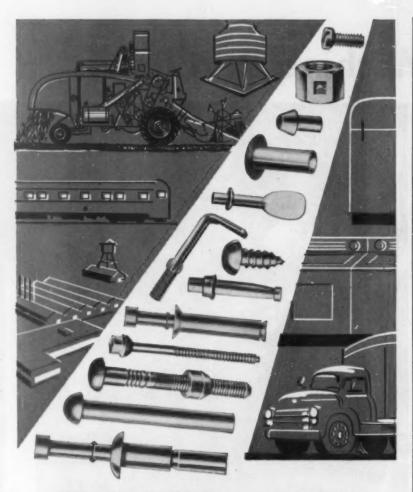
According to an engineer at Pratt & Whitney Co., the tool company in West Hartford, Conn., that built the system in the picture, numerical control answers the widespread complaint that machinists mostly use their machines as desks while they try to translate blueprints into a product.

People at Boeing Airplane Co. enthusiastically acclaim numerical control as the greatest, most radical improvement in manufacturing during the life span of their company.

 Picking Up Momentum—The aircraft industry and the Air Force have been responsible for much of the recent gain in development and acceptance of numerical control in the machine tool industry. By the end of 1958, five tool companies will have delivered control systems, comprising more than 100 numerically-controlled milling machines,



PUNCHED TAPE carries all instructions for positioning the work in Pratt & Whitney jig borer above. No machinist is needed to tend the machine; work is more accurate.



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In Canada: Parmenter & Bulloch Manufacturing Company, Ltd., Gananaque, Ontario

"... competition among the companies is fierce ..."

STORY sorts on p. 183

to the Air Force under its Machine Tool Modernization Program.

An Aircraft Industries Assn. committee recommends that all spar mills, skin mills, and profilers purchased from now on be equipped for numerical control. At the industry's request, Massachusetts Institute of Technology has scheduled a course in this subject for Mar. 25 to Apr. 3. MIT's Servomechanism Laboratory helped in much of the pioneering in these controls.

• Two Kinds—Numerical control works on the simple principle that every point in the path of a cutting tool can be related by numbers to the starting point—so much distance forward or back, across, up or down. The path of the cutting tool can theoretically be accurately controlled by feeding its adjusting devices a series of mathematical coordinates. The main trick is to build a machine that will do this over and over with an accuracy of 5/10,000 in. or even 1/10,000 in.

Moreover, there are two types of machine operation:

 One works at a single point, such as boring or grinding a hole, or between close limits, as in cutting a slot. Its path at the single point or between points does not have to be continuously controlled.

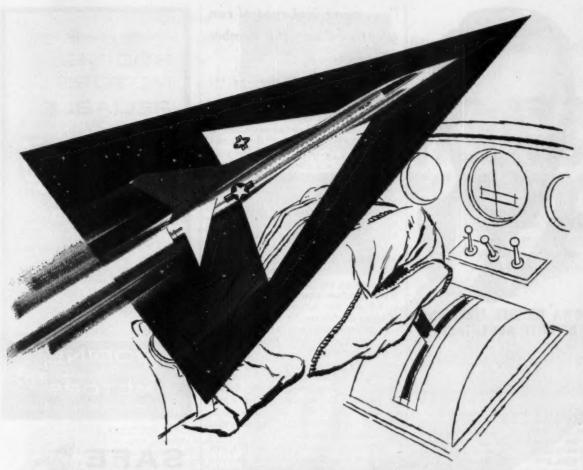
• The other does a more versatile and complex job that requires control of a continuous path, as in cutting a curved edge. Here the contour may be ever changing, and the control device must be more complicated.

• Easier Ones First—Most of the perhaps 50 systems that are in various stages of development are of the first type. Not more than a dozen provide continuous-path control, though that's the type the aircraft industry finds most interesting. Air Force development contracts, for instance, apply only to this type of system.

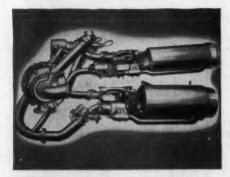
Competition among the couple of dozen companies in end-point control systems is pretty fierce, because the whole idea of numerical controls is new and the market is still small. Yet new systems and new machines are sprouting every month. Pratt & Whitney's system for jig borers and hole grinders came out last month; Warner & Swasey Research Corp., subsidiary of Warner & Swasey Co., will announce a new control system this month.

Pratt & Whitney's jig borer illustrates the refinements that must go into even the simpler end-point type of numerical control.

First, the mathematical coordinates are read from the blueprint and are re-



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"... numerical control can greatly reduce the number of rejects . . "

STORY storts on p. 183

corded as punches on tape. Then the tape is fed into a reader that directs the former manual job of the machinist in positioning the work. Pratt & Whitney designed its jig borer so that the positioning table will always inch into position from the same direction, with four speeds including a very slow speed for the final approach. When the work is in precise position, the drive screw then eases back a trifle to relieve any strain that might upset hair's-breadth accuracy.

 Without Panic—W. S. Tandler of Warner & Swasey says numerical control can run machines faster and more accurately than men can. It should end a lot of the nervous tension that troubles machinists, he says, citing the case of one company's head machinist who panicked whenever it came to drilling the last hole in a piece.

"When he starts out," Tandler explains, "the machinist has a piece of metal that's worth only a few dollars. By the time he's finished, he has added maybe \$5,000 to the value of the piece. He's so scared he'll ruin the part that he's a nervous wreck."

Numerical control, says Tandler, can climinate the chance of error and can greatly reduce the number of rejects. It can permit design to closer tolerances, another machine builder says, and this factor will become more important as tools and products get more complicated.

• Joint Effort—Any use of numerical controls requires close harmony between the tool builder and the maker of the electronic control device. Research and courses at MIT have helped in promoting this coordination. Research there goes back to 1949.

The first phase was basic research, the second was the building of an experimental machine. Both phases were sponsored by the Parsons Corp. of Traverse City, Mich., under an Air Force contract. Phase III, sponsored by the Air Force alone, covers studies of information processing, programing, and the economics of the field.

In the development of Giddings & Lewis Machine Tool Co.'s Numericord continuous-path system, MIT and General Electric Co. figured prominently. Bendix Aviation Corp. recently bought sole rights to the Parsons Corp. patents and is supplying controls for Kearney & Trecker Corp.'s tools under an Air Force contract.

North American Aviation, Inc., plans to market its tape control system,





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LYON VAN LINES, Inc. Los Angeles, California "... machine tools equipped with numerical controls carry a high price tag . . ."

STORY starts on p. 183

called NUMILL, designed by its own Autonetics Div. for continuous-path control. Cincinnati Milling Machine Co. uses an electronic system developed by Electrical & Musical Industries, Ltd., of Britain. Another tool builder that has had an Air Force contract is Morey Machinery Co., Inc.

Other producers of control systems include Electronic Control Systems, Inc., Farrand Optical Co., Laboratory for Electronics, Inc., and Concord Con-

trols, Inc.

GE and Barnes Engineering Co. are working on systems to apply numerical control to turret lathes and turret

The difficulty in this collaboration is that each industry must learn the intricacies of the other's technology. This is one big reason why some companies on both sides are staying out of numerical controls development for the

time being.
• Costs Run High-Machine tools equipped with numerical controls carry a high price tag. Pratt & Whitney says numerical control equipment adds about 25% to the cost of hole grinders and jig borers that already range, without this equipment, from \$41,700 to \$75,-350. GE says the added equipment for end-point numerical controls alone will range from \$15,000 to \$30,000, for continuous-path controls from \$30,000 to \$60,000

North American Aviation guesses its NUMILL system will cost in the vicinity of \$65,000 for the controls alone. But this system is highly complicated, including such refinements as flashing instruction to the operator as to the kind and size of material to be fed into the machine, the tool to be used, and the machine speed to be selected.

· Benefits-In return for the added outlay, the machine owner gets advantages that will open up a product designer's field of vision. They will permit repetitive accuracy in producing irregular shapes that formerly had to be machined only roughly and then hand-

Programing continuous-path controls is difficult, but it's by no means beyond the capability of electronic computers. Already, machine tool engineers are talking of the day when computers and numerical controls together will eliminate blueprints. Only the mathematical formulas will be fed into the system, and the machine will call for material and complete the operation unaided. END



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Chemicals Sit and Ride In Plastic-Lined Tanks

The problem of storing and transporting the newer, more powerful chemicals is being solved by a budding industry that specializes in coating and lining the inside of tanks and other containers.

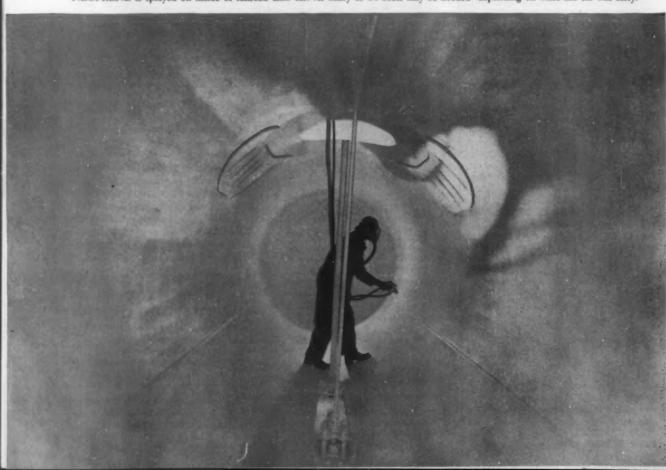
Chemicals are more powerful and work more wonders than ever-but when it comes to storing or transporting, many of the new ones are no joy. Some can eat their way through conventional tank cars and storage tanks. Others would be quickly contaminated if it weren't for special film-type tank linings that resist their reactive effects. Odorless solvents lose their quality of "odorlessness" if they come in contact with the metal walls of their containers. The newer paint resins, nitrogen fertilizers, herbicides, latexes, and polyethylene are other commodities that must be transported in lined containers.

This problem is nurturing a relatively new industry and a new breed of specialists to apply these coatings and

linings. One of these coming firms is Tank Lining Corp. of Pittsburgh, which claims to be the largest company specializing in the field application of sprayable linings. Other big names in the budding industry include Plastic Applicators, Inc., of Houston; Industrial Coatings Corp. and Lithcote Corp. of Chicago; Inner-Tank Lining Corp. of Cincinnati; Metalweld, Inc., of Philadelphia; Metalizing Co. of St. Louis; and Parker Bros., Inc., of Los Angeles.

• Case History—Tank Lining Corp. is a good example of how and why the industry is prospering. It was formed in 1950, by Ray L. Cathcart, Jr., and his brother, Wallace P. Cathcart (two World War II Marine pilots). Since then, business has been increasing at

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STEEL STRAPPING



the rate of about 50% a year. In 1956, the company did more than a quarter-million-dollars of business in liquid and sprayable linings.

The industry in general credits its rapid growth to the fact that it is highly specialized because (1) applying the special coatings demands precise work; and (2) a good deal of the work must be done in the field, since many of the tanks and storage bins are not movable.

It isn't unusual for Tank Lining Corp. to have as many as four crews in the field working on such contracts as an ammonium nitrate tank in La Platte, Neb., a caustic storage tank in Pine Bluffs, Ark., a chemical processing tank in Calvert City, Ky., and another chemical tank in Quebec.

All the work isn't done in the field. Tank Lining operates a plant at Carnegie, Pa., a suburb of Pittsburgh. Here, tank cars, trucks, and pipes are coated and lined-but Tank Lining's principal interest is in field operations.

• Technique—Applying these special plastic coatings takes a lot more than paint brush and bucket techniques. The tank may first have to be cleaned, preheated, or chemically washed—then sand-, grit-, or shot-blasted. Finally, as many as 20 coats are sprayed, brushed, or roller-coated onto the walls of the tank, to eliminate the porousness in the lining material itself, and to avoid the sagging and running that result when you try to apply a thick coat in one fell swoop. Then, after the coatings have been applied, most of them must be baked at temperatures up to 450F or chemically cured.

 New Uses—Because the chemical industry doesn't stand still, Tank Lining and its brethren are constantly experimenting to find new applications for old coatings or new coatings for new applications.

Application problems have included finding a way to coat the inside of an 80-ft.-high gas scrubbing tank only 7½ ft. in diameter. Tank Lining built in a makeshift push-button elevator to raise and lower the crew while it applied the necessary coats.

• Standards—Quality and related problems probably are the biggest worries facing the industry. Specifications both for quality and workmanship—can be stiff.

But that's only part of the problem the tank liners face. The other part is to educate the more casual customer to the need for standard specifications. It isn't unusual for a customer who lacks technical knowledge to specify merely "plastic lining," without explaining his requirements. The result is that unless the customer is dealing with an experienced company, he gets a "plastic" lining and not much else. END

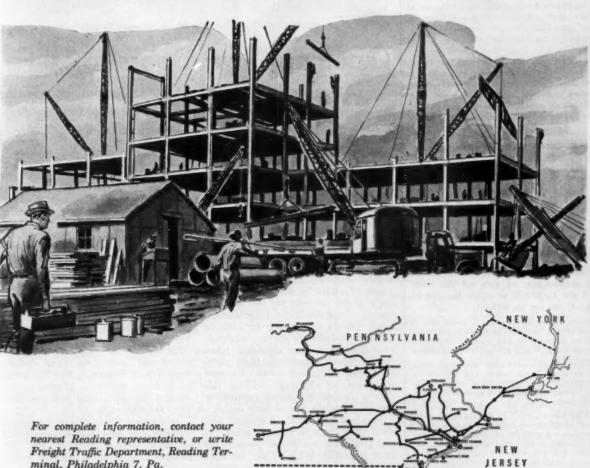
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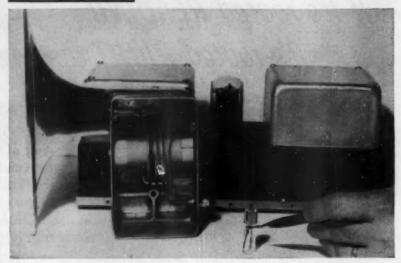
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High-fidelity addicts can now buy a speaker that produces sounds clear out of range of the most sensitive human ears. The Ionovac, a product of DuKane Corp., St. Charles, Ill., has a frequency range from 1,000 cycles per sec. to 1-million cycles per sec. (the average human ear can't hear much over 15,000).

The price range—\$135 to \$150 retail—places the glorified tweeter in the luxury class, but hi-fi is not the real market DuKane is shooting for. Ionovac's ability to respond to any frequency across this broad range without being pre-set is expected to make it especially valuable to science, medicine, and industries using ultrasonic transducers (which convert electrical vibrations into mechanical energy) for such things as air cleaning, welding, diathermy treatment, vaccine production, and changing the size of body organs.

Standard ultrasonic transducers produce their high frequency sound in the same way a radio or phonograph does at audible levels. They use electrical impulses to vibrate quartz, metal, ceramic, or similar diaphragms, which in turn pound the air and create sound waves. But most conventional transducers produce sound waves at a uniform rate, which means they have one predetermined frequency.

In place of a mechanical diaphragm, the Ionovac speaker has a small egg cup-shaped quartz cell with open ends. Near its center, the cup narrows to an aperture about the size of the lead in a pencil. In this space, air molecules are bombarded with a high-frequency, high-voltage current that bats the electrons of the molecules out of their orbits, thus creating violet-hued ionized air. This air is similar to that found in the ionosphere—the layers of air up to 250 miles above the earth's surface that reflect radio signals.

When the ionized particles are exposed to an intense electrical field, they oscillate. By varying the strength of the field, these oscillations are changed, causing expansion and contraction in the air and creating sound waves. This method of producing ultrasonic sound not only gives much greater flexibility of frequency, but, according to DuKane engineers, eliminates the weakest link in faithful hi-fi reproduction, the diaphragm.

In the past, the inertia of mechanical response and individual resonance and vibrating characteristics of the diaphragm kept it from catching subtle sounds, nuances, and overtones.

Ionovac sound reproduction works on the principle of the Ionophone developed six years ago by Siegfried Klein, a French physicist. Klein was hired by DuKane, who has the exclusive license in this country, to help its engineers improve his original idea. DuKane claims it is now six times as efficient as the original model. END



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NEW PRODUCTS BRIEFS

A baby blow torch that looks like a large fountain pen gives 30 min, of 3,500F degree heat. It is turned on and off by twisting the replaceable power cartridge at the back end of the tube. The Jet King, distributed by Morton Mail Order Co., Boonton, N. J., is said to be handy for repairing wiring, lamps, and appliances, peeling paint, and starting picnic fires. It costs \$1.95, including cartridge. Additional cartridges cost 39¢ for two.

A two-way VHF radio that weighs less than 25 lb. and takes up less than twothirds of a cubic foot of space has been developed by Learcal Div. of Lear, Inc., Santa Monica, Calif., for use in small business aircraft. It provides 50 kilocycles spacing in the civilian very high frequency range, which permits a maximum of 800 channels to cover future expansion of communication traffic. It's available with from 25 to 61 crystals for \$2,960 to \$3,782.

Foam-type wood and metal polishes that clean, polish, and wax in one operation and require little or no buffing are now available. They are said to be effective on painted or varnished surfaces, leather and linoleum, plastics, and sporting goods. The products are marketed as Polywax Wood Polish, Polyglo Metal Polish, and Preservatol Rust & Tarnish Preventive by Kensol Corp., Allentown, Pa. Cost is \$1.89 retail per 12 oz., or direct from the manufacturer for \$2 postage prepaid.

A protective covering for metals such as high-finished steel, titanium, and aluminum is said to eliminate stains, light filtering through, and other faults of previous coverings. The product is a laminate of thin metal foil and two sheets of medium kraft paper with an adhesive surface that is applied to the metal to be protected. It is manufactured by Onco Products, Inc., Middletown, Ohio. Price is about 4¢ per sq. ft. in mill-sized rolls east of the Mississippi, slightly higher in the West.

Seamless fuel bladders made of Fluorolastic Teflon are being manufactured by the Joclin Mfg. Co., Wallingford, Conn. They are said to overcome the problems encountered in the flow of fuel, solvents, and explosive chemicals in ram-jet and rocket engines where the temperature range is from -450F to 550F. Teflon bladders don't get brittle at low temperatures nor do they ooze at high temperatures. Cost varies with the size and shape of the bladder.



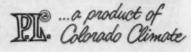


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Where Credit Control Falls Down

In the latest issue of its monthly bulletin, the Federal Reserve Board took a long backward look at last year's developments in money and credit. The board's operations, as thus revealed, raises some disturbing questions about the role of general and indirect monetary controls in our economy.

The Fed's review contains no real surprises for most followers of the money market. It makes clear that the money managers followed a restrictive policy in 1956 "in view of inflationary pressures and of capacity limitations on growth in total output."

But this restrictive policy, which increased the cost of borrowing to the highest levels in over a quarter of a century, did not succeed in curbing the over-all use of credit. According to the Fed's figures, total bank loans hit a record peak last year of \$89.8-billion. This was accomplished despite a policy of restraint that entailed two increases in the discount rate as well as keeping the increase in the money supply to less than 1%.

Thus the Fed's policy did not actually cut down on the use of credit. The most that can be said of restraint is that without it borrowing would have been greater by some unknown amount.

It is also plain that the general controls applied by the Fed did not work in an even and impartial fashion. It has worked unevenly by making it more difficult for new or smaller firms to borrow all they need. The large firm not only can get credit at lower rates than small firms. It also has, as the Fed points out, "direct contact with and access to a number of banks as well as to other sources of outside financing."

Although William McC. Martin, chairman of the Fed, acknowledges that an indirect policy of restraint can have a direct impact on some borrowers, he feels that it is not the job of the monetary managers to allocate the credit available. This, he states, is determined by the marketplace.

But the unevenness of a tight policy means that there is no restraint at all for some groups of borrowers. To curb these would call for an even tighter policy than the Fed pursued.

Martin has expressed the view that credit policy should have been tighter earlier. This may well be true, but it is questionable that it would have produced a more even squeeze. On the contrary, it is probable that the areas that have been pinched the most—small business, local governments—would have been squeezed even more drastically.

The implication of the Fed's own figures is that the effects of monetary policy cannot be figured out in advance. No matter how skilled the talents of the monetary managers, the indirect weapons at their control sometimes misfire and sometimes hit the wrong target. Although some enthusiasts of monetary policy feel that the Fed can do no wrong, Martin himself does not make this mistake. As he put it, "We are not convinced that our present institutional arrangements are altogether satisfactory; nor do we believe that Federal Reserve operations in the past have been entirely successful. Therefore, we will welcome a comprehensive study of our financial institutions and practices . . . and will cooperate in every possible way with such a group."

In view of last year's experience with monetary policy, the Fed's attitude is nothing more than a recognition of the facts of life. It has been obvious almost from the beginning of 1956 that monetary policy was not working the way it was supposed to. The thing now is to find out why; then we will perhaps be able to do something about it.

Too Faint Praise

When Treasury Secy. George M. Humphrey recently indicated his hope that Congress would be able to reduce the budget, it was a foregone conclusion that foreign aid would bear the brunt of any Congressional effort to use a pruning knife. For it is obvious that if a congressman must choose between providing funds for a road in his home territory and providing funds for a dam in South Asia, his constituents are bound to come first.

It is for this reason that we are somewhat disappointed in the Fairless Committee's report on foreign aid, which was published this week (page 123). As we read the report, it seems to be saying to Congress: "Foreign aid is a burden that this country must carry today, and probably for a long time to come. But for goodness sake see that the aid program doesn't grow any larger; in fact, cut it if you can."

Given the perfectly natural bias of Congress, foreign aid needs to be sold on the Hill with more enthusiasm than this. And given world conditions today, more enthusiasm in general for aid to the underdeveloped countries is required of this country. Nothing else will match up with the lofty position on world affairs that Pres. Eisenhower has taken since the Suez crisis.

To say this is not to take issue with the specific proposals of the Fairless report. It makes some extremely valuable recommendations. Among these we would like to mention its proposals for (1) putting aid on a two-year basis so that it is considered by each new Congress rather than each year; (2) giving a considerably freer hand to the President to operate the program as events abroad dictate; and (3) making further efforts to see that private investment plus freer trade carry the main burden of economic development abroad.



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